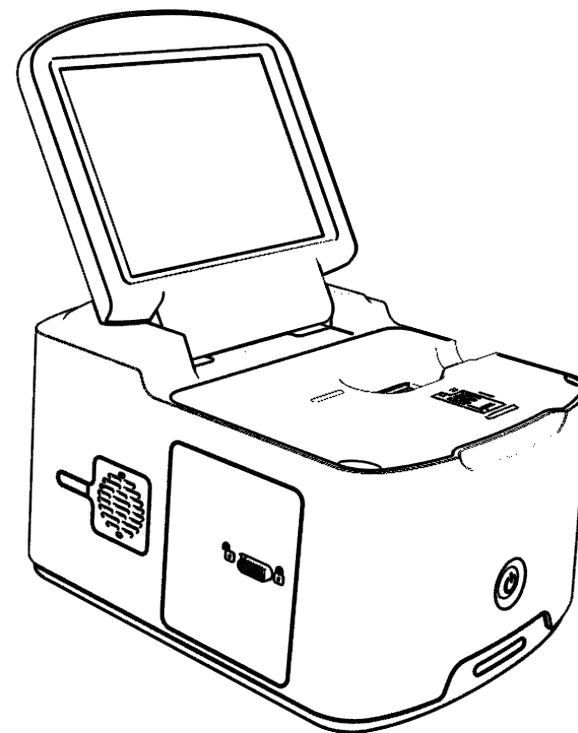


>>> **Veterinary Blood Gas Analyzer** <<<



Manufacturer: Guangzhou Wondfo Biotech Co., Ltd.
Address: No. 8 Lizhishan Rd., Science City, Luogang District, 510663,
Guangzhou, P.R. China
Distributed by: Guangzhou Wondko Technology Co., Ltd.
Tel: +86 20-32293661
Fax: +86 20-32022032
E-mail: wondfo-vet@wondfo.com.cn
Web: www.wondko.com

Model No.: Vcare-5000

Guangzhou WondFo Biotech Co,Ltd.



CONTENTS

Chapter 1 Notice For Use	3
Chapter 2 Overview	5
Chapter 3 Installation	15
Chapter 4 Setting	25
Chapter 5 Maintenance	39
Chapter 6 Repairs	42
Chapter 7 Failure Processing Instructions	43
Chapter 8 Contact	49

Chapter 1 Notice For Use

Thank you for choosing Wondfo Veterinary Blood Gas Analyzer (hereinafter referred to as "Analyzer"). This product is developed, designed and sold by Guangzhou Wondfo Biotech Co., Ltd. Company (hereinafter referred to as "Wondfo Company"). This instruction describes in detail the characteristics of the product and related information, and the graphical operation steps for easy use. Please read the instruction carefully before you use it.

1.1 Usage

Welcome to read 'Instructions for veterinary blood gas analyzer'.

This manual contains the contents of analyzer installation, setup, quality control analysis, data management, maintenance and warranty, after-sales service and so on. The best performance of the analyzer can only be guaranteed if the manufacturer's instructions are used in full compliance. Therefore, operation and maintenance must be carried out in accordance with the contents of this manual.

In order to remind the operator to avoid potential dangers and hazardous conditions, we offered different warning signs depending on the degree of harm of the operation.

Warning: An operation or situation that may cause casualties of a person or patient.

CAUTION: Action or situation that may cause damage to the equipment, error data, or failure of the process.

1.2 Symbol definition

The following symbols are visible on the product packaging associated with the analyzer:

Symbol	Description
	Caution!
	Reference
	Electrostatic sensitive symbol
	Recycling
	Trademark
	The reagent capsule door is closed
	The reagent capsule door is opened
	Push-button
	Insert direction of test card

	Net port
	Serial port
	USB interface
	Environment-friendly use period
	Production date
	Temperature limited
	Do not reuse
	Expiry date
	Total test number
	Catalog number
	Sequence number
	Batch code
	Control
	This WEEE flag indicates that this device is classified as an obsolete electrical or electronic device under the EU WEEE directive.

Chapter 2 Overview

2.1 Product name

Veterinary Blood Gas Analyzer

2.2 Type Specifications

Vcare-5000

Parameter symbol	Description
pH	pH value
pCO ₂	Partial pressure of carbondioxide
pO ₂	Partial pressure of carbonoxide
K ⁺	Potassium concentration
Na ⁺	Sodium concentration
Cl ⁻	Chlorine concentration
Ca ⁺⁺	Calcium concentration
Hct	Hematocrit

Calculation parameter

Parameter symbol	Description
cH ⁺	Hydrogen concentration
cH ⁺ (T)	Temperature corrected hydrogen concentration
pH (T)	Temperature corrected pH
pCO ₂ (T)	Temperature corrected CO ₂ partial pressure
pO ₂ (T)	Temperature corrected O ₂ partial pressure
HCO ₃ -act	Actual bicarbonate concentration
HCO ₃ -std	Standard bicarbonate concentration
BB (B)	Blood buffer base
BE (B)	Residual base of blood
BE (ecf)	Base Excess Extracellular Fluid
ct CO ₂	Total CO ₂ concentration
Ca ⁺⁺ (7.4)	Calcium concentration at pH 7.4
AnGap	Aniongap
tHb (est)	Total hemoglobin (estimated)
sO ₂ (est)	Oxygen saturation (estimated)
pO ₂ (A-a)	Alveolar arterial oxygen pressure difference
pO ₂ (A-a)(T)	Temperature corrected Alveolar arterial oxygen pressure difference
pO ₂ (a/A)	Arterial alveolar oxygen tension ratio
pO ₂ (a/A)(T)	Temperature corrected arterial alveolar oxygen tension ratio
RI	Respiratory index
RI (T)	Temperature corrected breathing index
pO ₂ /FI O ₂	Ratio of oxygen partial pressure to inhaled oxygen
pO ₂ (T) /FI O ₂	Temperature corrected ratio of oxygen partial pressure to oxygen

Product structure and composition: it consists of host computer, external electronic self-inspection card and embedded software. The host includes sampling / processing unit, testing unit, data processing / display unit, printer and scanner.

2.3 Appearance

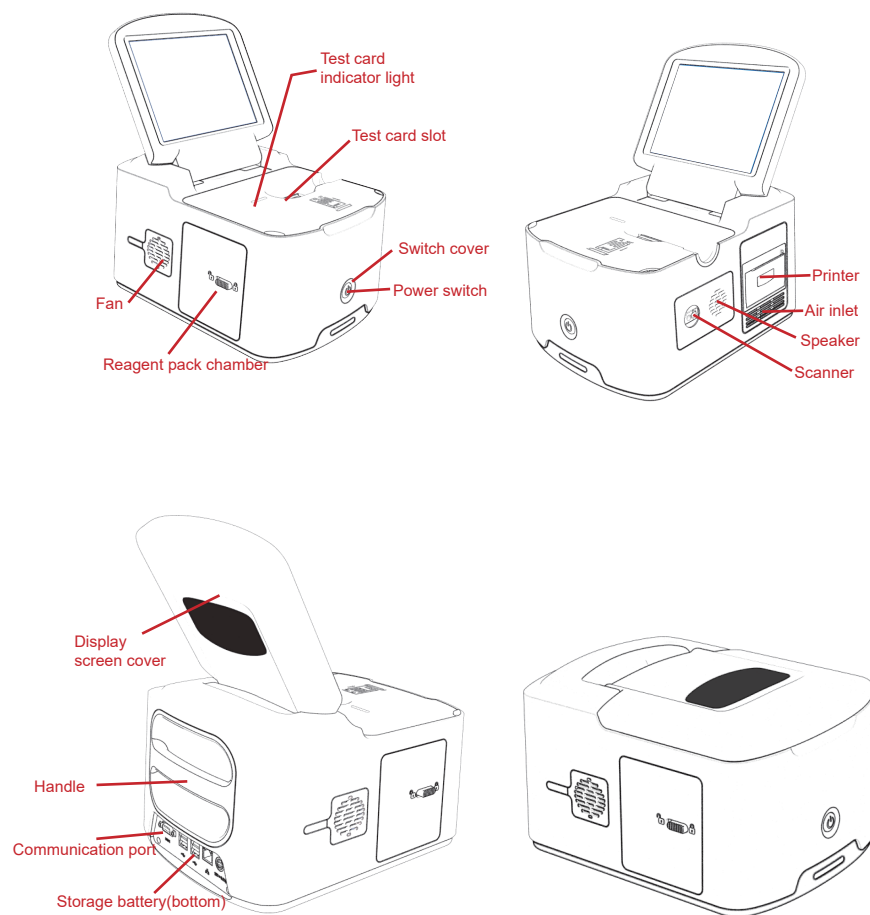


Figure 2-1 Appearance

2.4 Composition And Accessories

2.4.1 Thermal Printer

The thermal printer is located on the right side of the analyzer and is to output the patient sample results, quality control analysis results, animal information and calibration results with thermal print paper.

2.4.2 Test Card

The test channel is located just above the front of the analyzer for inserting a test card for sample analysis. The test card status indicator is on the left side of the test card slot; The indicator light is green when the inserted test card meets the system requirements; When the inserted test card does not meet the system requirements, the indicator light will be red and the test card will be automatically pop up, and the interface will pop up an error dialog box.

The test card is a disposable supplies which consists of the test card body, foil, syringe, sensor modules and other components. The test card body has liquid piping and waste liquid chamber. The waste liquid chamber is used to store used calibration liquid and test sample.

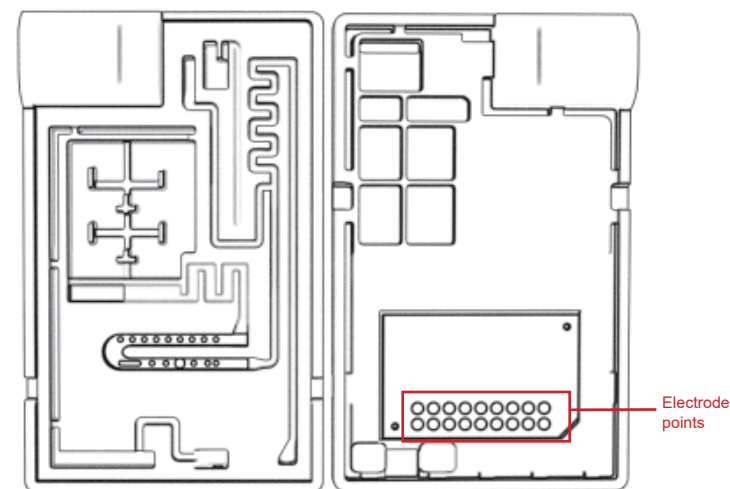


Figure 2-2 Appearance of the test card

Packaging

1. The test card is sealed with aluminum bag, and each test card is equipped with an aluminum bag and desiccant.
2. The manufacturer, storage temperature, identification of one-time using, batch number, expiration date and other information are printed on the aluminum bags.
3. A label which attached in the test card aluminum contains two-dimensional code.

Note:

- Do not use the test card if the test card is damaged or the drying bag is broken.
- You must use a test card from Wondfo Company or a local sales representative.
- Before testing, make sure that the temperature of the test card and the analyzer is the same as the ambient temperature.
- Do not touch electrode points and syringes.
- Test card is a disposable supplies.

- Make sure to use the test card within the validity period indicated on the test card package and use it immediately after unsealing.
- The test card must be inserted into the instrument in the correct direction, otherwise it will not be tested.

Disposal

Test samples will remain in the test card, so the used test card will have potential biological hazards. It should be processed in accordance with related medical waste recycling provisions or local administrative department regulations.

2.4.3 Power Indicating light

The power indicating light is on the analyzer's power switch and is displayed in green, with the following meaning:

- Indicator on: the analyzer is on and in normal power supply.
- Indicator Off: The analyzer is off.

2.4.4 On / Off button

Switch located in the front center of the analyzer for opening and closing the analyzer.

2.4.5 Display

The analyzer deliver informations to the operator through the LCD screen, which can be opened or closed. It displays the analyzer's operating interface, sample results, database informations, system informations and prompts. The display is a user interface that allows the user to operate the analyzer by touching the display, such as testing, entering information, and viewing results.

2.4.6 Communication interfaces

The Communication interfaces is located below the rear side of the analyzer. The analyzer contains the following Communication interfaces:

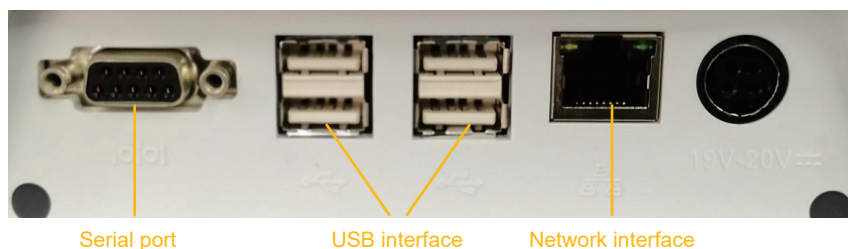


Figure 2-3 Communication interfaces

USB interface: Used to connect external devices, such as external scanners, printers, keyboard, mouse and U disk

Serial interface: Used for debugging for engineer

Network Interface: Connect the analyzer to the LIS system over the network

2.4.7 Reagent Pack

The reagent pack holder is located on the left front end of the analyzer for insertion of the reagent pack to complete the calibration of the system. The switch is located in the reagent pack door, toggle the switch to open the door.

The calibration of the system is done through the calibration solution in the reagent pack, and the system will be calibrated for each measurement. The calibration fluid is sealed in an aluminum-plastic bag to avoid environmental contamination. Each reagent pack can afford 50 times test, so please purchase it according to actual needs.



Figure 2-4 Appearance of the reagent pack

Packaging

1. Packing: Reagent pack is packed with aluminum bag, each reagent pack equipped with an aluminum bag and desiccant.
2. Aluminum plastic bags are printed with the manufacturer, storage temperature, batch number, expiration date, the maximum number of times and other informations.
3. The label on the aluminum plastic bag contains the two-dimensional code.

Note:

- You must use a reagent pack provided by Wondfo or your local sales representative.
- Ensure that the reagent pack is used during the period indicated on the aluminum bag.
- Stop using the quality control solution when finding any breakage, air or liquid leakage or other similar condition.

2.4.8 Barcode Scanner

The built-in barcode scanner is located on the right side of the analyzer and is used to scan barcode information to the analyzer. Barcode Scanner can scan the following items: the barcode of the test card, the bar code of the reagent pack, the barcode of the quality control solution.

Steps to scan the barcode:

In the main interface, select the appropriate test sample and click on the "start test", the top of the screen will pop up "scan test card barcode", then the barcode scanner will turn on, and it will emit red light and green aiming light. Aligning the scan point with the barcode to scan (all the barcode should be covered with green aiming light), the distance between the scanner and the barcode should be 6-15 cm, if the scanner automatically turned off, please click the barcode scanning. If the information scanned into the analyzer meets the system requirements, the

system will enter into the next interface; other wise the system will pop up the error dialog box.

Note: If you are doing the quality control test, after scanning the bar code of the test card, you need to click the "scan barcode" button in the "Please scan the quality control barcode" interface to scan the bar code of the quality control solution on the box. When you replace the reagent pack, you also need to scan the barcode of the reagent pack on the aluminum bag.

Attention

1. Don' t look straight at the red light beam to avoid hurting the eyes.
2. Don' t scratch the protective cover of the scanner with any hard objects so as not to have any scratching that will affect the scanning.
3. Don' t strike the protective cover of the scanner so as not to crash it that may injure the person.
4. When the protective cover of the scanner gets dirty, scrub it with dust-free cloth so as not to affect the scanning.

2.4.9 Cooling Fan

The cooling fan is located on the left side of the analyzer and is used to adjust the internal temperature of the analyzer. When the temperature inside the system reaches a certain value, the exhaust fan will automatically open and adjust the wind speed to enhance the system's cooling capacity

Note:

- To avoid overheat of the instrument, please check it regularly to make sure the vent hole, the radiation hole, the intake and outtake of the cooling fan is not obstructed or stuck by foreign matter or the wall, keeping the venting system in a good condition.
- When malfunction happens, please contact the manufacturer or its local agent.

2.4.10 Quality Control Solution

Users need to conduct quality control tests through quality control solution to ensure that the analyzer and test card are in normal operation, thus ensuring the accuracy of the test results. The concentration of each parameter in the control solution is known, and these concentrations are within the effective clinical range. An acceptable range of measurement parameters is included in each control tank. Quality control solution according to its use can be divided into two categories: blood gas biochemical quality control solution, hematocrit control solution.

Quality Control Solution Packaging

1. Blood gas control solution is packed in an ampoule bottle of 2.5 mL. Every package has 5 bottles. Hematocrit control solution is packed in an ampoule bottle of 1.7 mL. Every package has 5 bottles.
2. The name, lot number, expiry date and other related information is printed on the label of the bottle and the packing box.

Note:

- Must use the quality control solution provided by Wondfo Company or its local distributors.
- Make sure of using the quality control solution before the expiry date printed on the packaging.
- Stop using the quality control solution when finding any breakage, air or liquid leakage or other similar condition.

2.4.11 Electronic Quality Control

Electronic control is divided into internal electronic control and external electronic control, internal electronic control is automatically completed by the internal self-test circuit , external electronic control is complete by the external electronic self-test card. Internal self-test circuit and external electronic self-test card both are the test card simulator, can simulate the test card to provided the analyzer with given values of the voltage, current and conductance signal, and then comparing the measured value of the analyzer and the given value of the electronic self-test signal to determine the analyzer' s performance and detection effect.

Internal Self-test Circuit

Internal self-test circuit integrated in the analyzer internal, the analyzer will automatically complete the internal electronic quality control. When the internal electronic quality control does not pass, if the user has an external electronic control card, use it for external electronic quality control, otherwise please contact the manufacturer for maintenance.

External Electronic Self-test Card

Users can use external electronic self-test card for external electronic quality control, it is recommended to do the control every 24 hours. The external electronic self-test card is packaged separately, and the label on the package contains information such as name, instruction and other informations. When the user suspects the accuracy of the sample results, an external electronic self-test card can be used to determine whether the faulty is happened in the test card or in the analyzer. When transporting an external electronic self-test card, place it in the box. Insert the electronic self-test card into the testing channel when doing external electronic self-test.



Figure 2-5 Appearance of the Electronic Self-test Card

Cleaning of the External Electronic Self-test Card

Clean the external electronic self-test card if the contact plate is contaminated.

Steps:

1. Soak dust-free cloth with anhydrous alcohol.
2. Wring up the dust-free cloth.
3. Scrub the external electronic self-test card with the dust-free cloth.

Note:

- Do not immerse the external electronic self-test card into any liquid.
- The dust-free cloth should keep moist but without water drop.
- When the external electronic control does not pass, please contact the manufacturer for maintenance.

2.4.12 External Device

Scanner that can be connected to the analyzer through USB interface: The scanner that support virtual keyboard input.

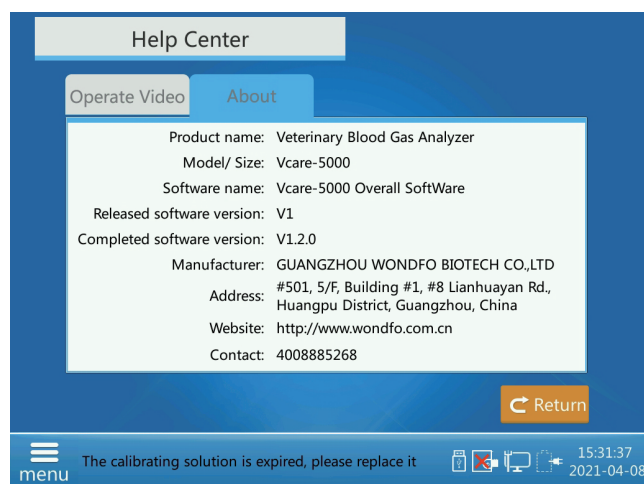
Printer that can be connected to the analyzer through USB interface: HP LaserJet Pro P1108, HP LaserJet 1020 Plus and HP DeskJet 1010.

Note:

- Must use the external device illustrated by the manufacturer.

2.4.13 Embedded Software

The instrument uses the embedded software for the HV-BGA 4000 software. After the boot, click "Menu" and select "Help Center", then click "About" to view the software information, as shown below



2.5 Configuration

2.5.1 Standard Configuration

- One Analyzer
- One Power Cable
- One Power Adaptor
- One Li-On Rechargeable
- One Pack of Printing Paper (10 rolls)
- One Cross Screwdriver
- One Instruction Sheet
- One Look-up Card
- One Warranty Card
- One Certification
- One User Acceptance Certificate
- One Packing List

2.5.2 Optional

- Test Card
- Reagent Pack
- Quality Control Solution
- Adapter of Capillary Tubes
- External Electronic Self-test Card

Chapter 3 Installation

3.1 Packaging

If the package is damaged and the analyzer is damaged after receiving the analyzer, contact the carrier immediately and claim for damage, and contact your supplier at the same time. After confirming the analyzer is packed, please follow the steps below to remove the packing material and install the analyzer.

3.2 Opening

Take out the accessories and the analyzer. Preserve the packing materials in case of need of transportation or preservation.

- (1) Check the accessories with the packing list.
- (2) Check if there is any mechanical damage with the analyzer or accessories.
- (3) Hold the sides of the analyzer with your hands or hold the handle when moving the analyzer in case of any damage to it.
- (4) Put the analyzer on a steady operating table.

For any problem please restore the packing and contact your supplier.

Warning

1. Do not use if damaged after unpacking
2. Avoid falling and colliding

Note:

- Keep the packing material for later transportation or storage

3.3 Installation Requirement

3.3.1 Environment Requirement

- If power is supplied using an AC power source, the analyzer's power cord should be connected to a grounded protective power outlet.
- Avoid direct sunlight.
- Ambient temperature at $+10^{\circ}\text{C} \sim +30^{\circ}\text{C}$.
- Relative humidity at 25% to 80% (no condensation).
- Atmospheric pressure in $70 \sim 106.6\text{kPa}$ ($525\sim 800\text{mmHg}$).
- Placement of the analyzer is flat and the surrounding space is spacious.
- Ensure that the analyzer is far from strong electromagnetic radiation.
- Avoid dust and volatile gases.
- Ensure that the analyzer is away from explosive gases or vapors, as well as corrosive items.

Attention:

Do not put any container with liquid on the analyzer.

Note:

- The above requirements also apply when the analyzer is battery powered.
- If the room temperature exceeds the operating temperature range of the analyzer, the resulting analysis results will be unreliable and the system will pop up a warning dialog box prompting the user.
- Do not place the device in a location where it is difficult to disconnect the device.

3.3.2 Power Requirement

The power supply connected to the analyzer should conform to the requirement as below:

Table 4-1 Power Requirement

Voltage	Tolerance Range	Input Electricity	Frequency
220V	$\pm 10\%$	1.2A-0.5A	50Hz

Warning

1. Make sure to use the analyzer under well-grounded conditions.
2. Ensure that the input voltage meets the analyzer requirements.

3.4 Installation Procedure

Warning

The installation must be conducted by the after-sales service worker authorized by Wondfo Company as some damage may happen to the analyzer if the installation is operated by the personnel that is not authorized or trained by Wondfo.

Put the analyzer in the place with environment conforming to the installation requirement of 4.3 before you perform the installation as below.

3.4.1 Connecting to Alternating Power Source

Connect one end of the power source adaptor to the power source input interface of the analyzer and the other end to the power source cable before connecting the power source cable to the power socket with ground protection.

Note:

- Please use a power cable with protective ground conductor and a power socket with ground protection.

3.4.2 Battery Installation/Taking out

If you need the battery to supply the power, please install the battery first.

Warning

Cut off the alternating power source to the analyzer before installing or taking out the battery.

3.4.2.1 Battery Installation

1. Turn off the analyzer, cut off the power source and disconnect the power source adaptor and other cables.
2. Put the back of the analyzer up on a flat table with a protection pad.
3. Pull off the screws with a cross screwdriver on the battery chamber and open cover of it.
4. Take out the battery from the pack and put it into the battery chamber, battery interface facing right and label up.



Figure 3-1



Figure 3-2

Warning

Touching the battery interface with hands or metal is forbidden in case of short circuit that would endanger personal safety or damage the battery.

5. Put the battery flat and press the handle in the end into the left slot.
6. Close the battery chamber cover and install the screws.



Figure 3-3

3.4.2.2 Taking Out The Battery

The procedure of taking out the battery on the contrary to its installation procedure. Hold the handle and pull out the battery after loosening the screws.

Note:

- The analyzer can only use batteries provided by Wondfo Company or its local agent.
- Fully charge the battery before using it.
- When the battery is in service of the analyzer and will be finished soon, a dialog box will pop up to prompt the user to connect the analyzer to alternating current power source. Meanwhile, the battery symbol in the bottom of the screen and the power indicator light in the front of the analyzer will twinkle as a reminder.
- The analyzer will be charged whenever being connected to external alternating current power source regardless of that it is on or off.

3.4.3 Installation/Replacement Of The Printer Paper Roll

The thermal printer paper roll is 58mm wide with a diameter of 30 mm. The screen will display as 'Please check the printer cover or check if the printer paper is finished' to prompt the user to install or replace the printer paper roll when the analyzer is to print and the printer paper roll is incorrectly installed or finished.

3.4.3.1 Installation Of The Printer Paper Roll

1. Open the printer cover.
2. Put the new printer paper roll into the box, keeping the outside surface of the paper roll facing up to the thermal print head.
3. Pull out straight 2 cm of the paper and shut down the printer cover.



Figure 3-4

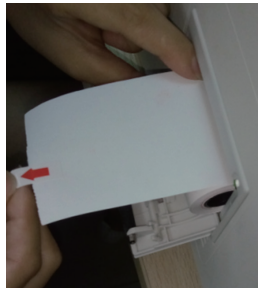


Figure 3-5



Figure 3-6

3.4.3.2 Replacement Of The Printer Paper Roll

The replacement of the printer paper roll is similar to its installation. Please take out the finished printer paper roll before install a new one.

Warning

1. Please use printer paper rolls provided by Wondfo Company or its local agent, otherwise it will damage the built-in thermal printer, which is not within the warranty coverage.
2. Please do not directly touch the thermal print head or the paper detector with hands in case of any damage brought by static electricity.

Note:

- Please keep the printer cover closed unless you're installing the printer paper roll or debugging.

3.4.4 Starting up/Powering off of the Analyzer

Note:

- Please make sure that all the cables are well connected up before starting up the analyzer.

3.4.4.1 Starting Up The Analyzer

Press the switch button in the front of the analyzer to start up it.

3.4.4.2 Powering Off The Analyzer

Hardware powering off: Press the switch button in the front of the analyzer for 3 seconds to power off it.

Software powering off:

1. Click the 'Menu' in the bottom of the screen and click 'System Manager'. A dialog box as below will pop up:
2. Click the button 'Shutdown' and then 'Confirm' in the dialog box that pops up.

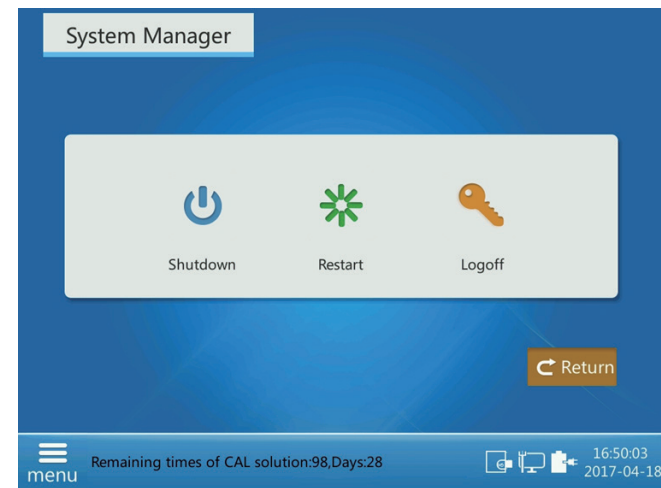


Figure 3-7 Powering off the Analyzer

3.4.5 Users Login/Logoff

3.4.5.1 Users Login

1. Power on the analyzer and a dialog box as below will pop up:

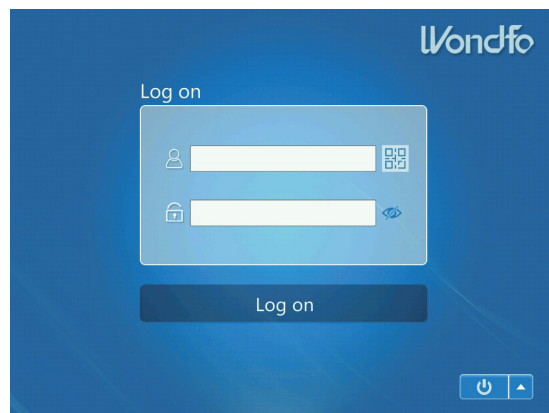


Figure 4-8 Enter the username and password

2. Enter manually your username and password and click 'log on'

If you want to enter your username by scanning the barcode, please click the QR code symbol and scan your username barcode.

3.4.5.2 User Logoff

1. Click the 'Menu' in the bottom of the screen and click 'System Management' . A dialog box as below will pop up:

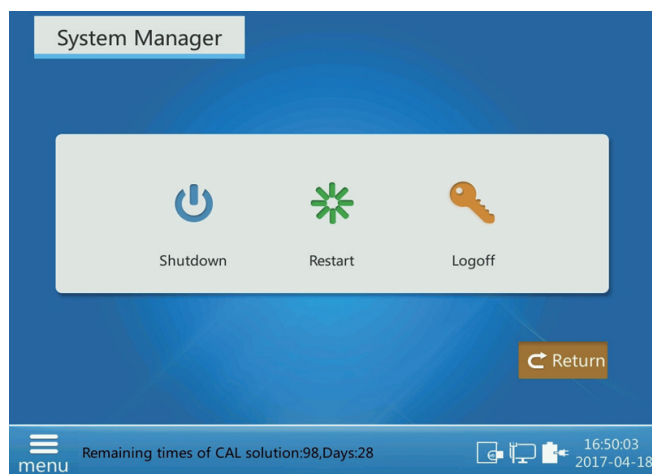


Figure 3-9 User Logout

2. Click 'Log off' and then 'Confirm' in the dialog box that pops up. The system will enter the user interface, and follow up the user login instruction, then you can log out switch the user.

Note:

- Please do not log off the user when testing or printing is going on.

3.4.6 Setup The Date And Time

Attention

Please make sure that the system date and time is consistent with the current date and time when using the system, otherwise it will cause misdiagnosis.

1. In the main interface, click the button 'Menu' in the lower left corner and click 'System Settings' of the first level menu to enter its secondary menu.
2. Click 'Date' and 'Time' respectively to the next interface.
3. Set the right date and time.
4. Click 'Confirm' in the dialog box that pops up to save the setting and return to the main interface.

3.4.7 Replacement of the Reagent Pack

Warning

1. It is forbidden to perform the operation of replacing the reagent pack in the off state.
2. Each reagent pack can only be installed once. Once replaced, the old reagent pack will be void. If the system does not pop up prompting information to replace the reagent pack, it is prohibited to perform the operation of replacing reagent pack.

The operator should follow the operation instructions when replacing the reagent pack and take safety precautions (such as wearing protective clothing, wearing gloves, etc.).

Please follow the steps below to replace the reagent pack:

1. Check the validity information on the package of the reagent pack and confirm that the reagent pack has not reached its expiry date.
2. Remove the reagent pack from the box and place it at room temperature for at least 24 hours to return to room temperature.
3. After the reagent pack has returned to room temperature, wipe the moisture on the aluminum bag.
4. In the main menu interface, click 'Replace the calibrating solution pack' , enter the interface to confirm the calibrating solution pack replacement.

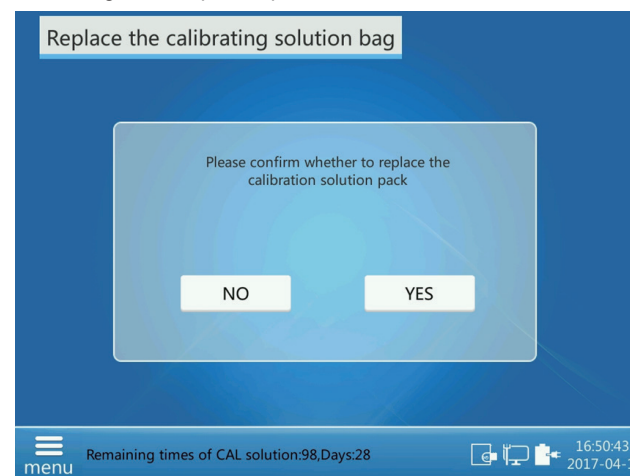


Figure 3-10

5. Click 'Yes' and the system will display the following interface:

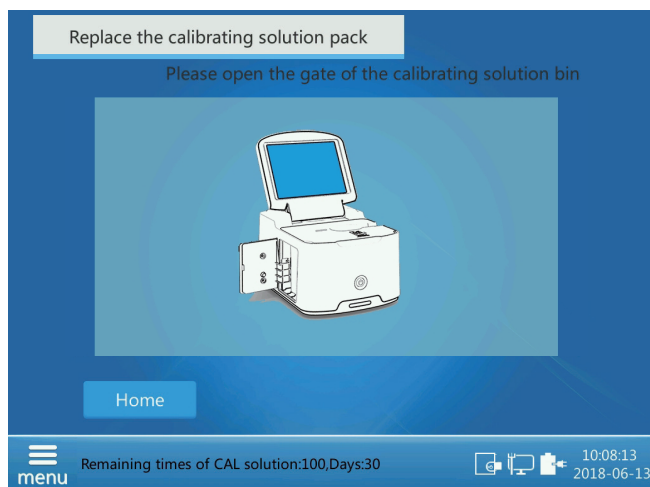


Figure 3-11 Open the Reagent pack Chamber Door

6. After the system has entered the interface to open the door of reagent pack, tear the aluminum bag and take out the reagent pack.

Note:

- When tearing the aluminum bag, take care of the barcode on it.
7. Remove the cap on the reagent pack.
 8. Pull the switch to open the reagent pack holder door on the left side of the analyzer.
 9. When removing the old reagent pack from the analyzer, the system will go to the next step and the scanner will turn on automatically.

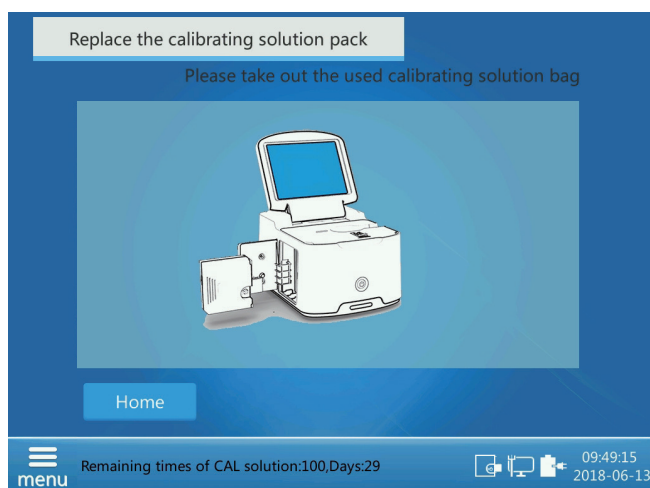


Figure 3-12 Taking out the Reagent pack

10. Scan the barcode on the aluminum bag of the reagent pack.

If the bar code scan is successful, the analyzer will turn off the bar code scanner and analyze the code information. If the bar code information scanned into the analyzer meets the system requirements, the system will enter the next interface. If the bar code information scanned into the analyzer does not meet the system requirements, the system will pop up the prompt dialog box.

If the scanner is turned off, click 'Scan the barcode' again to scan the barcode on the new reagent pack aluminum bag.

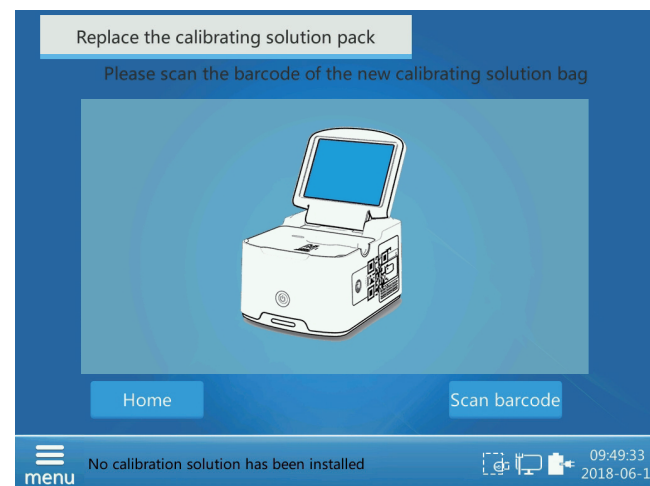


Figure 3-13 Scan the barcode of the reagent pack

11. Insert the new reagent pack into the analyzer and make sure it is inserted in place and the system will enter the interface to close the reagent holder door.

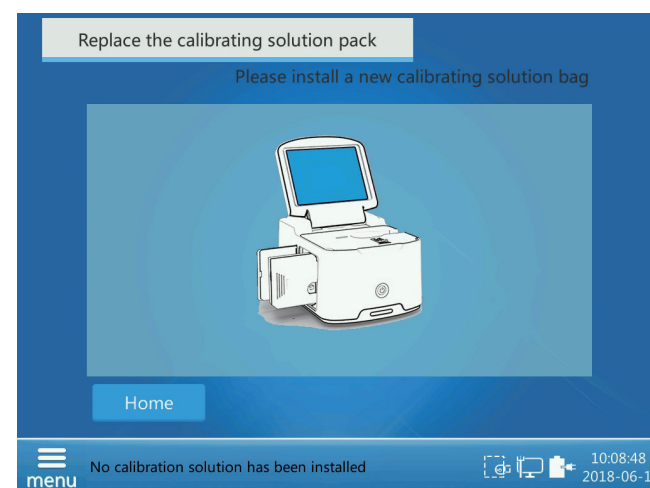


Figure 3-14 Insert the reagent pack

12. Close the reagent pack holder door.

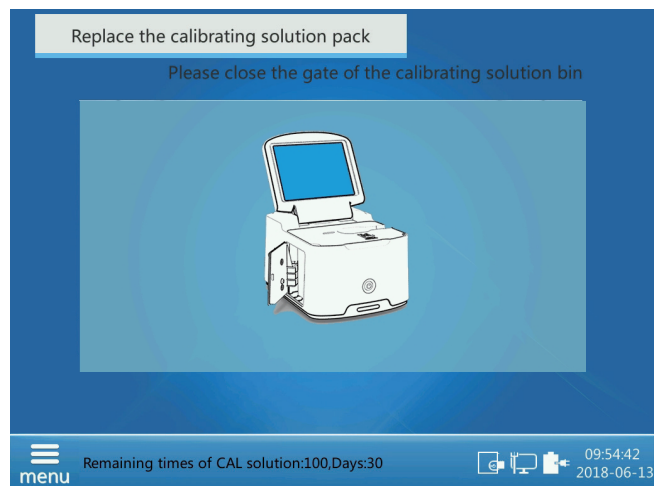


Figure 3-15 Close the reagent pack compartment door

13. After the replacement of the reagent pack is successful, the system will give the following message:

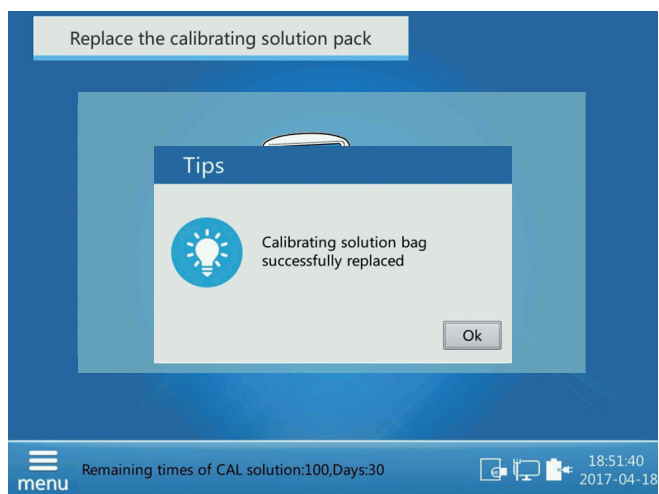


Figure 3-16 Reagent pack replacement successful

14. Click "OK" and the system will return to the main menu interface.

Note:

- Make sure the replacement is according to the normal process, otherwise the system will not be able to carry out the sample test.
- If the barcode is not a reagent pack bar code, the system will prompt the barcode type to be wrong.
- If the scanned reagent bar code is used or the reagent pack has been expired, the system will pop up the following message:

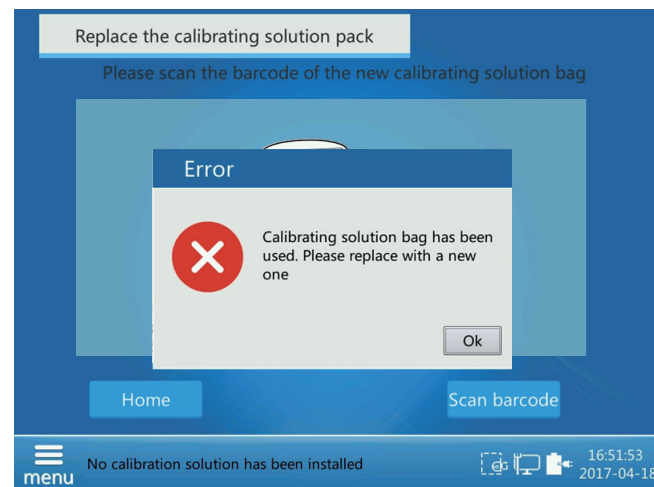


Figure 3-17

- If the reagent pack has exceeded its expiry date, the status bar will indicate that the reagent pack has failed.
- If the remaining number of days for the reagent pack is 0, the status bar will show that the reagent pack has failed.
- If the reagent pack has been finished, namely the number of usable times is 0, the status bar will show that the number of its usable times is 0 and the number of available times is 0.

3.4.8 Connecting To External Device

The analyzer can be connected to a scanner and a printer (see 3.4.12) that supports virtual keyboard input. The scanner and printer are connected to the analyzer via a USB port, and the entire system should meet GB4793.1, GB4793.9 requirements.

Note:

- Make sure that the external device supports virtual keyboard input.
- Be sure to ensure that the entire system meets the requirements of GB4793.1, GB4793.9.

Chapter 4 Setting

The analyzer can be set up to meet different clinical requirements. You can set the following items by setting the Menu:

- Print setting
- Network setting
- Date language setting
- Light & sound setup
- Quality control blockade setting
- Patient information setting
- Reference range setting
- Unit setting
- Calibration parameter setting
- Hct setting

Note :

- In order to ensure the safety of the analyzer, the setting operation can only be done by the system manager, service engineer and the factory engineer. The general operator should not set the analyzer.
- After setting down, even after the shutdown, the system will save the changes.

The settings are introduced as follows.

4.1 Start Up

1. Press the analyzer switch button to turn on the analyzer

2. Manually enter your user name and password, and click "log on"

To enter your username by scanning the barcode, click " " and then scan the user barcode.

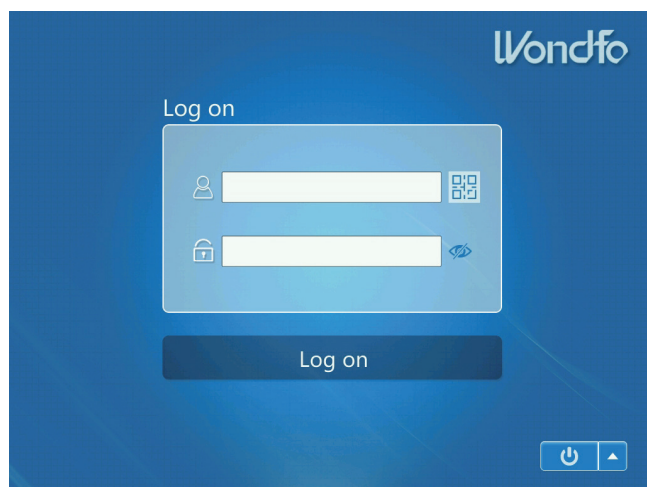


Figure 4-1 Enter the user name and password

4.2 System Setting

In the main menu interface, click "System Setting" and enter the system settings interface, you can set print setting, network setting, date and time setting, language setting, lighting & sound setting and factory maintenance.

4.2.1 Print Setting

The print settings are used to set the printer of the analyzer, the report content, and the number of copies.

The print setup procedures are as follows:

1) Click "Print Setting" to enter the print setting interface.

The print settings interface is shown as below:

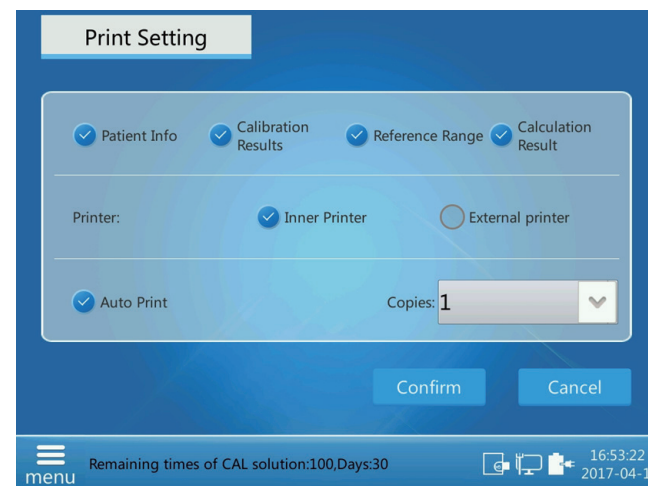


Figure 4-2 Print setting

2) In the print settings interface you can:

- Set whether to print patient information or not, "√" means to print patient information, the default is set to print.
- Set whether to print the calibration results or not, "√" means that print calibration results, the default is set to print.
- Set whether to print the reference range or not, "√" means that print reference range, the default is set to not print. If the reference range is selected, the sample result report will include a reference range for the parameters. The three-level quality control report will contain an acceptable range of measurement parameters.
- Choose to use the printer, there are two options to choose from: built-in printer and an external printer, the default settings is the built-in printer.
- Set whether to print automatically, the default is set to automatically print.
- Choose the number of copies to print, there are two options to choose from: 1 and 2, the default setting is 1.

3) Click "Confirm" to save the settings and return to the system main interface.

4.2.2 Network Setting

The network settings are used to set the analyzer's communication mode and network connection mode. The network setup steps are as follows:

1) Click "Network Settings" to enter the network settings interface.

2) The network settings provide three settings: communication, net and WIFI.

4.2.2.1 Communication Setting

1) Click "Communication" to enter the network settings - communication settings interface.

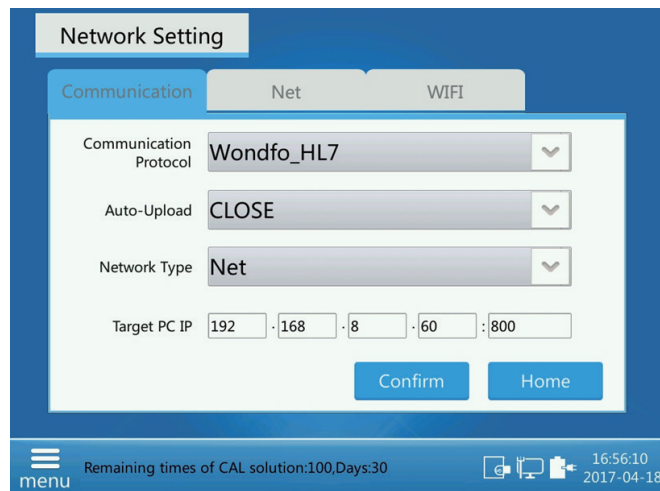


Figure 4-3 Network setting-communication

2) In the Network Settings - Communication Settings interface, you can

- Set the communication protocol, only one option: Wondfo_HL7.
- Set the automatically upload, there are two options to choose from: open and close. If set to open, then after the sample test completed, the system will automatically send the sample test results to the LIS system, the default is set to open.
- Set the communication mode, there are two options to choose from: network and WIFI, the default settings for the network.
- Enter the IP address of the LIS system (target computer) connected to the analyzer.

3) Click "Confirm" to save the settings.

4.2.2.2 Net Setting

1) Click "Net" to enter the network settings - net settings interface.

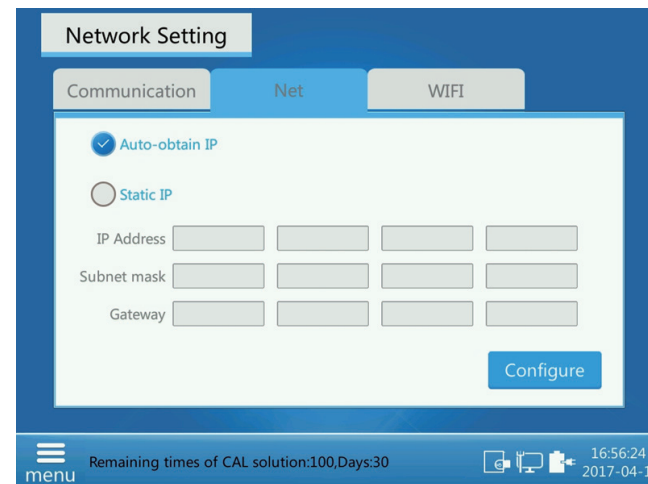


Figure 4-4 Network setting-net

2) Choose how to get the IP address. The system provides two options: automatically obtain the IP address and set an IP address, the default is set to automatically obtain the IP address. When you select an IP address, you need to enter the following information: IP address, subnet mask, and default gateway.

Note:

- When setting the IP address, it should be noted that the IP address must be on the same network segment as the IP address of the target computer.
- The IP address of the analyzer connected to the same target computer must be different.
- The analyzer can transfer data to the target computer only if the target computer and the analyzer have been successfully connected.

3) Click "Confirm" to save the settings, and return to the system main interface

4.2.2.3 WIFI Connection

1) Click "WIFI" to enter the network settings - WIFI settings interface.

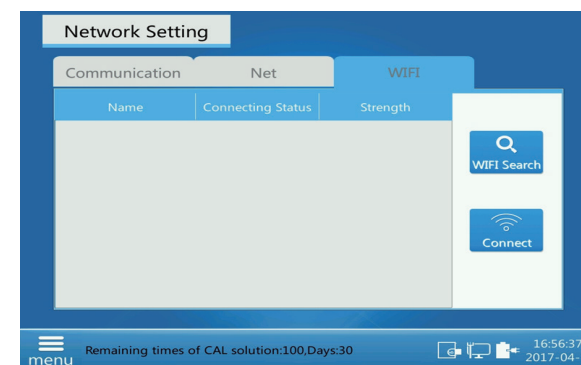


Figure 4-5 Network setting-WIFI

- 2) Click the "WIFI search" , the system will display the name of searched network, connection status and strength. When connecting to a WIFI with a password, you need to enter a password.
- 3) Select the network you want to connect to and click "Connect" . After the connection is successful, the status bar at the bottom of the interface will display the WIFI icon.

Note :

- Ensure that the selected network is on the same network segment as the network used by the target computer.
- 4) Click on the communication and click "Confirm" to save the current settings.

4.2.3 Date Setting

The date setting is used to set the date format, date, and time of the analyzer. Set the steps as follows:

- 1) Click "Date Time Setting" to enter the date time settings interface.

The date time settings interface is shown in the following figure:

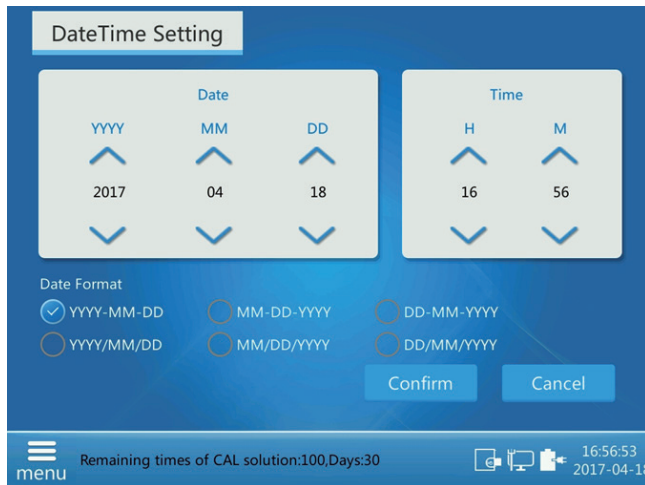


Figure 5-6 Date setting

- 2) In the date setting interface you can
 - Change the system date and time.
 - Select the date format. There are six formats to choose from, namely MM-DD-YYYY, YYYY-MM-DD, DD-MM-YYYY, YYYY / MM / DD, MM / DD / YYYY, and DD / MM / YYYY, the default format is YYYY-MM-DD.
- 3) Click "Confirm" to save the settings and return to the system main interface.

4.2.4 Light & Sound Setup

The light & sound settings are used to set the time the analyzer automatically turns off the screen backlight, adjusts the brightness of the backlight, turns on and off the touch screen, and sets the volume of the system. The lighting sound setting procedure is as follows:

- 1) Click "Light & Sound Setup" to enter the light sound settings interface.

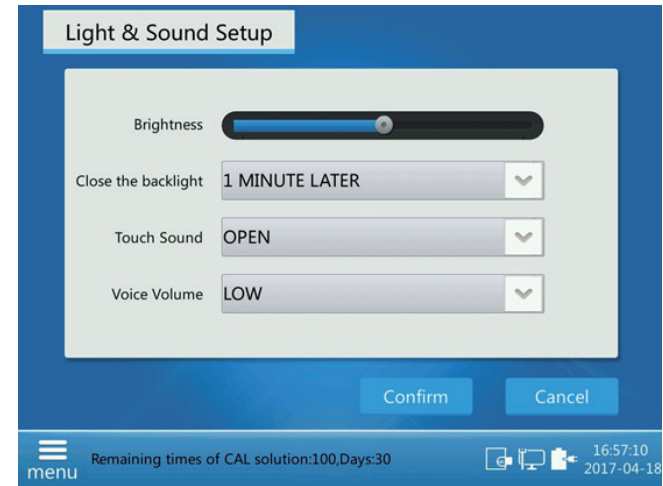


Figure 4-7 Light & sound setup

- 2) In the light sound settings interface, you can:
 - Adjust the slider to adjust the brightness of the backlight.
 - Select the time to automatically turn off the backlight, with the following options: Never, after 10 seconds, after 1 minute, after 3 minutes and after 5 minutes, the default setting is 1 minute. When the backlight is turned off, the system will enter the power saving mode. In the power saving mode, touch the display to turn on the screen backlight.
 - Set the touch screen sound. There are two options: On and Off, the default is set to On. When you set it to On and the system volume is not 0, there will be a sound prompt when you press the button.
 - Select the system volume, there are four options to choose from: high, medium, low and no, the default is set to medium.
- 3) Click "confirm" to save the settings and return to the system main interface.

4.2.5 Factory Maintenance

Through the factory maintenance of the analyzer, the user can test and diagnose some of the module's function of the analyzer. It helps to understand whether the analyzer's working condition is normal and find and solve the analyzer failure.

The analyzer contains information about the analyzer and the manufacturer so that you can understand the analyzer's information and get in touch with us if necessary.

- 1) Click on the "Help" , the system will enter the related interface.
- 2) View interface information.
- 3) Click "Back" to return to the System Settings screen.

Note :

- Only service engineers and factory engineers can do this.

4.3 Test Setting

In the main interface of the system, click the "Menu" , enter into the first level menu, you can click the "Testing Setting" to switch to the second setting menu.

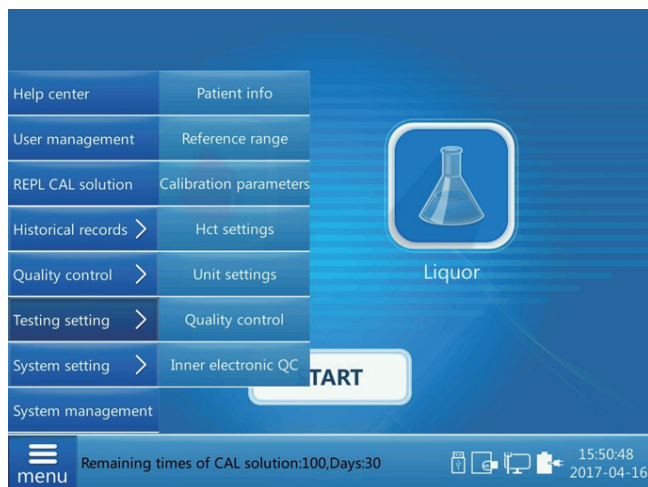


Figure 4-8

With the testing settings, you can make the following settings:

4.3.1 Quality Control Blockade Settings

The Quality Control Blockade setting is used to set the analyzer's handling of parameters that have not passed the quality control test. Quality control blockade is valid: If a parameter does not pass a quality control test (runaway), the testing result of this parameter is no longer reported in the sample test. The result is marked as "-". Invalid quality control blockade: If a parameter does not pass the quality control test (runaway), the sample test will report the testing result. and the testing results of this parameter will be followed by a symbol marked as *. The system defaults to blockade.

Set the quality control blockade as follows:

- 1) In the main interface, click the menu, enter the first level of the testing settings, and click on the "Quality Control" into the QC settings interface.

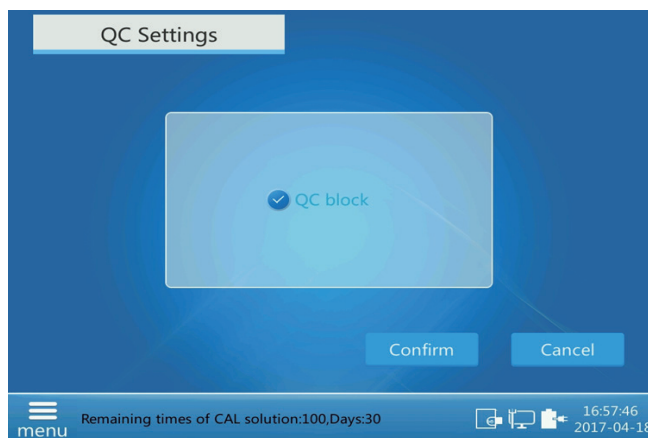


Figure 4-9 QC blocking setting

- 2) Set the quality control blockade, select that the block is valid. The default setting is valid for blockade.

- 3) Click "Confirm" to save the settings and return to the main interface.

5.3.2 Animal Information Settings

The animal information is to set the animal information item displayed on the interface when the analyzer is in the blood sample test. The analyzer displays the following items by default: ID, temperature, FIO₂ and operator ID. If a message is selected in the animal information setting, the interface will allow the user to enter the corresponding information in the blood sample test flow (in this case, the user can also click "OK" without entering the information). The following table lists the animal information items that can be entered by the analyzer.

Table 4-1 Animal information table

Parameter	Description	Range (option)	Accuracy	Unit
ID	ID number	1-16	N/A	N/A
Operator ID	Operator ID number	1-16	N/A	N/A
Sample ID	Sample ID	1-16	N/A	N/A
Temperature	Temperature	14.0-44.0	0.1	°C
		57.2-111.2	0.1	°F
Sex	Sex	Male, Female, Others	N/A	N/A
tHb	tHb	1-26	0.1	g/dL
		10-260	1	mg/dL
		0.6-16.1	0.1	mmol/L
FIO ₂	FIO ₂	0.21-1.00	0.01	x.xx
		21-100	1	%
MCHC	MCHC	29.0-37.0	0.1	g/dL
		290-370	1	g/L
RQ	RQ	0.70-2.00	0.01	x.xx
Animal type		Dog, cat, rabbit, cow, horse, other	N/A	N/A

Note :

- The animal information does not contain atmospheric pressure input information because the analyzer has an built-in atmospheric pressure sensor. If the sensor fails, the analyzer does not provide all the test results for oxygen.
- The item selected and the entered corresponding information will be printed in the testing result; items selected but the corresponding information not be inputed will also be printed in the testing result but the corresponding information is blank; No selected information will not be printed.

The animal information setting procedure is as follows:

- 1) In the main interface, click the "Menu" , and enter into the testing setting interfere, then enter the information settings interface.
- 2) Click on the "Patient's Information.1" , choose items you want to display.

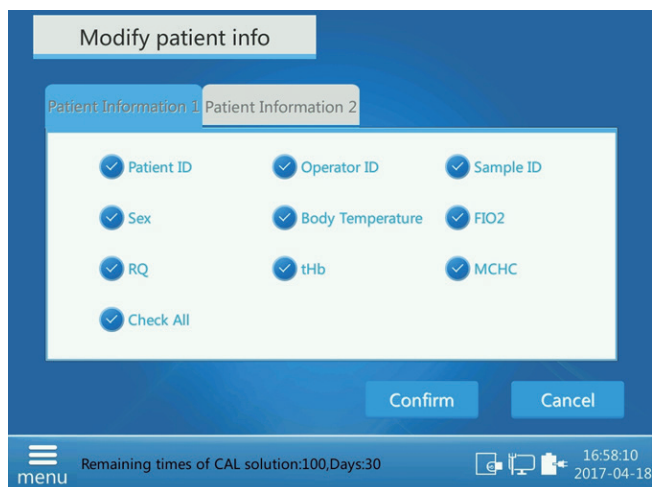


Figure 4-10 Patient Information 1

Note :

- If you want to select all the items in the current interface, click the "Full Selection" .
- 3) Click "Confirm" to save the settings and return to the system main interface.

4.3.3 Reference Range Setting

System administrators, service engineers, and factory engineers can set the reference range (normal physiological range) of the analyzer. There are three sets of reference ranges for the user to choose from: reference range 1, reference range 2 and reference range 3, the default is set to "reference range 1". The reference scope should be modified according to local conditions. The reference range can be printed in the report. When the testing result of the parameter is outside the reference range, the system will prompt you with ↑ or ↓. The reference range setting procedure is as follows:

- 1) In the main interface, click the "Menu" , and enter into the testing setting interfere, then enter the Reference Range Setting interface.

The reference range setting interface is shown below:

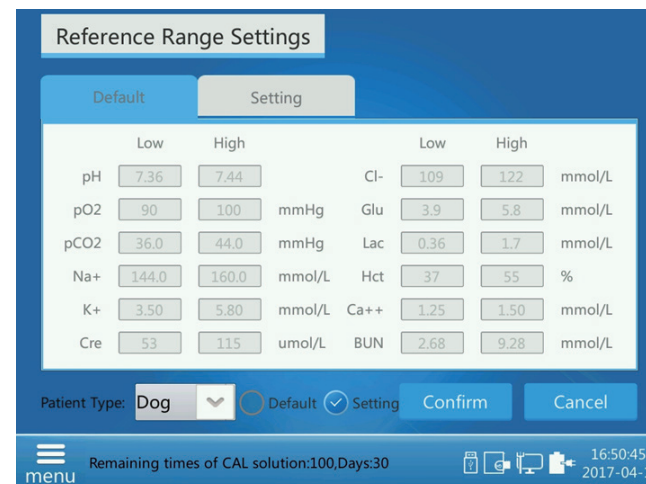


Figure 4-11 Reference range setting

- 2) Click to select a set of reference ranges and enter the minimum and maximum values for each parameter.
- 3) Click confirm to save the settings and return to the testing settings interfere.

Note :

- If the value entered exceeds the acceptable range of the analyzer, the system will prompt the correct range.
- After the parameter range has been changed, the system will save it.

4.3.4 Unit Setting

You can use the unit settings to select the analyzer's units used for the measurement parameters and input parameters.

The following table lists the default units of each parameter and other units that can be selected.

Table 4-2 Unit setting

Parameter	Defaults	Other options
Ca ⁺⁺	mmol/L	mg/dL
pCO ₂	mmHg	KPa
pO ₂	mmHg	KPa
Glu	mmol/L	mg/dL
Lac	mmol/L	mg/dL
Hct	%	x.xx
Cre	umol/L	mg/dL
BUN	mmol/L	mg/dL
tHb (est)	g/dL	g/L, mmol/L
SO ₂ (est)	%	x.xx
pO ₂ (A-a)	mmHg	kPa
pO ₂ (a/A)	x.xx	%
RI	x.xx	%
pO ₂ /FI O ₂	mmHg	mmHg /%, kPa, kPa/%
Ca ⁺⁺ (7.4)	mmol/L	mg/dL
pCO ₂ (T)	mmHg	kPa
pO ₂ (T)	mmHg	kPa
pO ₂ (A-a) (T)	mmHg	kPa
pO ₂ (a/A) (T)	x.xx	%
RI (T)	x.xx	%
pO ₂ (T) /FI O ₂	mmHg	mmHg /%, kPa, kPa/%
temperature	°C	°F
FI O ₂	x.xx	%
tHb	g/dL	g/L, mmol/L
MCHC	g/dL	g/L
Atmospheric pressure and local pressure	mmHg	kPa

The unit setup steps are as follows:

- 1) In the main interface, click the “Menu” , and enter into the testing setting interfere, then enter the unit settings interface.
- 2) Click on the “Part 1” to select the units of parameter.

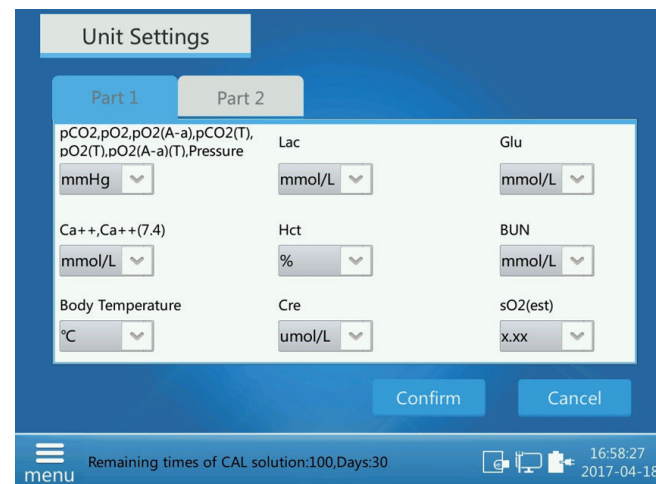


Figure 4-12 Unit setting 1

- 3) Click on the “Part 2” to select the units of parameter.

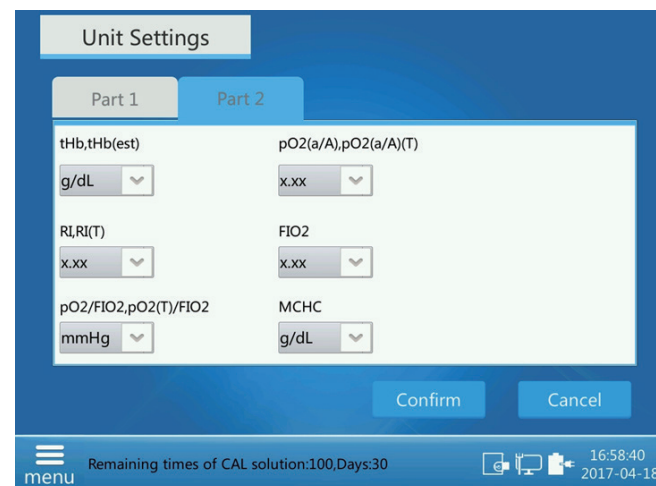


Figure 4-13 Unit setting 2

- 4) Click confirm to save the settings and return to the testing settings interfere.

Note:

The analyzer automatically converts the results of all the parameters in the database according to the changed units.

4.3.5 Calibration Parameter Setting

By calibrating the parameter, the data measured by the analyzer can be associated with the data measured by other veterinary blood gas analyzers. The correction slope range and offset range for each parameter are shown in the following figure:

Table 5-3 Calibration parameter setting

Parameter	Slope Rate Range	Offset Range
pH	0.800-1.200	+/-1.000
pCO ₂	0.800-1.200	+/-10.0 mmHg or +/-1.33 kPa
pO ₂	0.800-1.200	+/-40 mmHg or +/-5.33 kPa
Na ⁺	0.800-1.200	+/-30.0 mmol/L
K ⁺	0.800-1.200	+/-1.00 mmol/L
Cl ⁻	0.800-1.200	+/-20.0 mmol/L
Ca ⁺⁺	0.800-1.200	+/-0.500 mmol/L
Glu	0.800-1.200	+/-50.0 mg/dL or +/-2.78 mmol/L
Lac	0.800-1.200	+/-4.00 mmol/L or +/-36.0 mg/dL
Cre	0.800-1.200	+/-30 umol/L
BUN	0.800-1.200	+/- 1.8 mmol/L
Hct	0.800-1.200	+/-20%PCV

The calibration parameters are set as follows:

1) In the main interface, click the "Menu" , and enter into the testing setting interfere, then enter the calibration parameter settings interface. The calibration parameter setting interface is shown in the following figure:

Parameter	Slope	Intercept	Unit
pH	1	0	
pO ₂	1	0	mmHg
pCO ₂	1	0	mmHg
Na ⁺	1	0	mmol/L
K ⁺	1	0	mmol/L
Ca ⁺⁺	1	0	mmol/L
Cl ⁻	1	0	mmol/L
Glu	1	0	mmol/L
Lac	1	0	mmol/L
Hct	1	0	%
Cre	1	0	umol/L
BUN	1	0	mmol/L

Figure 4-14 Calibration parameter setting

- 2) Change the slope and offset of the parameter you want to change.
- 3) Click "Confirm" to save the settings and return to the main interface.

Note:

- The slope of each parameter is set to 1.0 by default, and the offset is set to 0.0 by default.
- Modifying the calibration parameters, it will not affect the previous testing results, but it will impact the subsequent testing results.
- Changing the slope and offset will change the test results you get from the analyzer later, so you need to do at least 10 sets of contrast experiments to verify the accuracy of the input data.

4.3.6 Hct setting

When only the content of Hct in the blood sample is analyzed, the anticoagulant to be used is selected by this menu. Proceed as follows:

1) In the main interface, click the "Menu" , and enter into the testing setting interfere, then enter the Hct settings interface.

Figure 4-15 Hct setting

- 2) Select the anticoagulant to be used. The analyzer offers three options for the use of anticoagulants: K2EDTA, K3EDTA and heparin lithium, the default is set to heparin lithium.
- 3) Click "Confirm" to save the settings and return to the testing settings interfere.

Chapter 5 Maintenance

As other precision instruments, only after careful 3 level and regular maintenance, the analyzer can

be in good working condition for a long time, and provide reliable measurement results and reduced the frequency of failure. This chapter describes the methods and procedures of preventive and regular maintenance. If you need more information, please contact our customer service department.

5.1 Cleaning And Disinfection of Analyzer

The analyzer requires cleaning and disinfection to remove dust, blood stains and stains on the surface of the analyzer. You can decide the period of cleaning and disinfection according to the policy of your organization.

Operators should observe safety precautions (such as wearing protective clothing, wearing gloves, etc.) when cleaning and disinfecting the analyzer.

Note:

Users should strictly follow the instructions to clean and disinfect the Analyzer.

5.1.1 Cleaning And Disinfection Of Analyzer Surface

Follow the steps below to clean and disinfect the outer surface of the analyzer:

1. Close the analyzer as described in 4.4.4.
2. Unplug the analyzer power cord and power adapter.
3. If the analyzer has been connected to other devices, unplug the wires.
4. Clean cloth soaked with 0.5% sodium hypochlorite, and then wring.

Note:

- Clean cloth should keep wet, but must not drip.
- 5. Wipe the outer surface of the analyzer with a wet cloth.
- 6. After thoroughly drying the outer surface of the analyzer, wipe the outer surface of the analyzer with a wet cloth to disinfect it.

Note:

- Disinfect the outside surface after cleaning.
- The outer surface should be thoroughly dried before disinfecting the outer surface.
- 7. Put the cloth into the garbage bag preventing biological hazards.
- 8. After the external surface of the analyzer is thoroughly dried, plug in the connecting wires, power adapter and power cord.

5.1.2 Printer Head Cleaning

Stains and dirt on the thermal printer heads can affect the printing clarity, users should clean the surface of the printing head regularly (at least once a month). Open the printer paper cover, wipe the printer paper, and clean the printing head with clean dust-free cloth dipped in with small amount of 75% concentration alcohol. Stubborn stains can be soaked with a little alcohol, and wipe with a clean soft cloth..After the natural air-dried, put the paper into the paper cover and close it.

Attention:

1. When cleaning, avoid liquid penetrating into the analyzer interior.
2. Do not use abrasive materials for cleaning
3. After cleaning, avoid any cleaning liquid remaining on the surface of the analyzer.

5.2 Maintenance Of The Analyzer

5.2.1 Battery Capacity And Maintenance

Warning

Improper operation may cause the battery to become heat, fire, explode, destroy or attenuate battery capacity. Before using the battery, please read the instruction and notices carefully.

- Battery Capacity Display:

When the instrument is turned off and not charged, the power indicator light (below the power switch) is not lit;

When the instrument is turned off and charging, the power indicator light is green and runs forward according to the current power;

When the instrument is in standby and no charge state, the power indicator light shows the current remaining electricity, and the color is green;

When the instrument is in standby and charging state, the power indicator light is green and runs forward with the current power;

When the instrument is in normal operation and the power indicator light will not lit, the battery symbol at the bottom of the LCD display shows the state of the rechargeable lithium battery.

Note:

- When only use the adapter to supply power, the adapter icon is displayed below the screen status bar.
- When only use the battery to supply power, the status bar below the screen shows only the battery icon that represents the actual battery amount.
- While using the adapter and battery to supply power, and the battery is in the non-charging state, the bottom of the screen status bar shows only the battery icon  (battery icon changes dynamically).
- While using the adapter and battery to supply power, and the battery is in the state of charge, the bottom of the screen status bars shows .

The analyzer has a rechargeable lithium battery and its charge control circuit. When the battery is used for the first time, the power consumption is not sufficient because of the loss of energy during storage and transportation, and the battery should be charged before use. Users only need to connect the AC power source to recharge the battery.

Note:

- If the battery is not used for a long time (two to three months), the user should charge the battery before using it again.
- Replace the battery:

A new battery should be replaced when the rechargeable lithium battery reaches the service life or the battery has peculiar smell and leakage.

Warning

1. Use the same type of rechargeable lithium battery supplied by Wondfo or your local sales representative
2. The positive and negative anodes of battery cannot be reversed connected, or it may cause an explosion.
3. If the analyzer is not used for a long time, please remove the battery and store it separately.
4. To prevent the battery from being discharged due to excessive discharge, if the battery is not used for a long time, please charge the battery every six months at least.
5. Discarded batteries should be returned to Wondfo or dispose in accordance with local regulations.

5.2.2 Printer And Printer Paper

Attention:

Make sure to use the printer paper provided by Wondfo, otherwise it may damage the built-in thermal printer. This damage is not included in the warranty.

The following requirements should be noted for the storage of the printer paper:

- Printer paper should be kept in a dry and cool place, avoiding high temperature, and humidity and direct sunlight.
- Avoid being put under fluorescent light for a long time.
- The storage environment of the printer paper cannot place PVC plastic, otherwise it may cause the printer paper's color change.

5.2.3 Maintenance Of The Analyzer

Attention:

The analyzer should carry out periodic safety testing, the main contents of the inspection include:

- a) Check if the mainframe and accessories are damaged;
- b) Check if the safety sign is damaged;
- c) Verify the function of the analyzer according to the instructions;

The tests should be carried out by trained qualified personnel and the results of the tests should be recorded. If the analyzer has any problems in the above tests, it must be repaired.

- The analyzer should avoid high temperatures, sun light, damping, dust or impact; and it should avoid heavy vibration when moving.
- Prevent liquid from permeating the analyzer interior in case of affecting the performance and safety.
- Medical equipment maintenance department should test the performance of the analyzer regularly.

Chapter 6 Repairs

6.1 Repairs

The warranty of the analyzer covers equipment failures due to the invalid of the material or the production process. During the warranty period, all defective parts can be repaired free of charge. Please call Wondfo if you need service or repairs.

6.1.1 Manufacturing Process And Raw Materials

Wondfo guarantees that the analyzer is produced with qualified material and production process. When the analyzer is under the normal use and maintenance, the maintenance or replacement of hardware products will be conducted, if the company receive a certificate of failure from the date of shipment to the end of warranty period.

6.1.2 Software And Firmware

For software or firmware installed in the hardware products of Wondfo, if a certificate of failure is received, the maintenance or replacement of the software or firmware medium would be maintained during the warranty period from the date of shipment, however, Wondfo cannot guarantee that the hardware, software or firmware products is not interrupted or error-free.

Note: Wondfo's obligations under this guarantee do not include freight and other charges.

There are no components that can be repaired by the user, and all the repairs should be carried out by the engineers and technicians recognized by Wondfo.

Wondfo has no liability for direct, indirect or consequential damages and delays caused by the following circumstances:

- Components are disassembled, stretched or re-commissioned
- Non Wondfo authorized personnel repair or change analyzers
- Damage caused by the normal use of the equipment in excess of the prescribed conditions
- Replace or remove the original serial number label or manufacturing logo
- Improper operation

Chapter 7 Failure Processing Instructions

This chapter provides you with full troubleshooting solution. When any abnormal or malfunction situation occurs in the analyzer, please refer to the solution provided below:

Table 7-1 Examples of troubleshooting

Serial No.	Problems	Solutions
1	After the test is completed, the test card does not pop up automatically.	Restart the analyzer to observe whether the test card can automatically pop up; observe whether the waterproof cover of testing card slot stuck the card. If stuck, open the waterproof cover with tweezers and remove the test card manually.
2	After the external self-testing is completed, the external electronic self-test card does not automatically pop up.	Restart the instrument to check whether the self-test card can automatically pop up; check if the self-test card is stuck by the waterproof cover inside the test card slot. If stuck, open the waterproof cover with tweezers and remove the external electronic self-test card manually.
3	During normal use, the analyzer is abnormally powered off and the user cannot take out the test card.	Reconnect the power and turn on the analyzer and after waiting for 1 minute, the test card will automatically pop up. If the test card can not automatically pop up at this time, check if the test card is stuck by the waterproof cover inside the test card slot. If stuck, open the waterproof cover with tweezers and remove the test card manually.

4	During normal use, the test card cannot be moved due to system crash.	Restart the analyzer and after waiting for 1 minute, the test card will automatically pop up. If the test card can not automatically pop up at this time, check if the test card is stuck by the waterproof cover inside the test card slot. If stuck, open the waterproof cover with tweezers and remove the test card manually.
5	During normal use, the analyzer prompts as 'test card fails' .	Use the external electronic self-test card for electronic self-testing. If the electronic self-testing is passed, use a new test card to re-test. If the problem persists after many attempts, please contact the manufacturer or your local sales representative.
6	During normal use, the system prompts as "POGO-PIN is not in contact".	Check if there is a foreign matter on the gold-plated pad of the test card and re-use a new test card for testing. If the problem persists, please contact the manufacturer or your local sales representative.
7	During normal use, the system prompts as "test card calibration fluid or test card gas is not in place."	Re-use a new test card for testing. If the problem persists, please contact the manufacturer or your local sales representative.

8	A prompt of "wrong insertion" appears during use.	Please confirm that you insert the external electronic self-test card during the electronic self-testing process and insert test card during normal testing process.
9	During normal use, the system prompts as "reagent pack expired".	Make sure the analyzer date is setted correctly. If the phenomenon persists, make sure that the pack does not exceed its expiration date. If the validity period is exceeded, please follow the instructions to replace the reagent pack.
10	During normal use, the system prompts as "reagent pack failure."	The reagent pack is out of service, please follow the instructions to replace the reagent pack.
11	During normal use, the system prompts as "reagent pack has been used and no available times."	The reagent pack has been finished; please follow the instructions to replace the reagent pack.
12	During normal use, the system prompts as "current date error" .	Set the date to be less than the production date of reagent pack. Make sure the date is set to be correct.
13	During normal use, the system prompts as 'reagent pack was not properly pulled out, please start the replacement process' .	Reagent pack has been pulled out; please follow the instructions to replace a new reagent pack.
14	During normal use, the system prompts as "Reagent pack barcode error" .	Make sure the bar code scanned is the bar code of reagent pack.

15	During normal use, the system prompts as "The scanned reagent pack is not available, please re-scan" .	Make sure that the scanned bar code is of a new reagent pack that does not exceed its expiration date.
16	Scanning reagent pack or test card barcode failed.	Make sure the window of the scanned glass is clean and not blocked by any foreign matter, and confirm the reagent pack or test card bar code is intact before rescanning the reagent pack and test card bar code.
17	The thermal printer does not automatically eject paper.	Open the thermal printer paper compartment cover, set the paper up, close the printer paper compartment cover, and click 'Print Again' .
18	Thermal printer is jammed.	If it was the first time, it may be because the paper is not placed well. Open the paper compartment cover, pull out the paper, tear off the wrinkled section, and return it to the paper compartment. Carefully adjust the paper position and close the printer compartment cover. If this is not the case, it may be because of the print module failure, please contact the manufacturer or a local sales representative for solution.
19	The analyzer prompts "The printer is out of paper".	Make sure there is paper in the printer paper compartment. If the paper has run out, reload the paper and close the printer compartment cover. If the problem persists, please contact the manufacturer or your local sales representative.

20	The analyzer makes no sound prompt when clicking the touch screen.	Enter the light sound settings interface and check the volume settings are correct.
21	Cannot be networked through built-in wireless WIFI.	Verify that the wireless networking strength and network settings in the system settings are correct.
22	Cannot communicate with LIS system.	Check whether the network or WIFI connection is successful, and then check the IP settings in the system settings of LIS system are correct.
23	Liquid is spilled onto the display screen during use.	Follow the instructions to clean and disinfect the screen.
24	External USB barcode scanner cannot scan bar code.	Verify that the scanner supports virtual keyboard input. If supported, unplug the scanner from the analyzer USB interface, reinsert it, and perform bar code scanning again.
25	The username and password are forgotten during normal use.	If the normal operator forgets the user name and password, contact the system administrator to check. If the system administrator forgets the user name and password, contact the manufacturer or your local sales representative for processing.
26	The internal battery is not charging properly.	Install the internal battery according to the instruction, and insert the power adapter to use the AC power to supply to the analyzer, then the analyzer will automatically charge the battery, if the battery still cannot be charged, please contact the manufacturer or a local sales representative for processing.

27	There is a liquid outflow at the bottom of the analyzer during normal use.	Smoothly remove the analyzer, ensure that the analyzer in the moving process is in a horizontal position and wipe out the liquid. Start the reagent pack replacement process to remove the reagent pack and verify that it is broken or not. If all goes well, carry out external electronic QC test and the 3 level QC test to ensure that the system is working properly.
28	The analyzer prompts "Ambient temperature is outside the permissible range".	Make sure that the ambient temperature of the analyzer is in the range of +10 ~ +31 ° C and the air inlet and outlet of analyzer are not blocked by foreign matter, and then reboot. If the problem persists, please contact the manufacturer or your local sales representative.
29	During the normal use, the system prompts "heating abnormal".	Please contact the manufacturer or a local sales representative to resolve.
30	During the normal use, the system prompts "mechanical cam position detection abnormal."	Please contact the manufacturer or a local sales representative to resolve.
31	After the date setting, it cannot be saved after rebooting the system.	Please contact the manufacturer or a local sales representative to resolve.
32	During normal use, there is an abnormal sound inside the analyzer.	Please contact the manufacturer or a local sales representative to resolve.
33	Test card is inserted reversely and result in testing failure.	Reboot the machine and remove the test card.

Chapter 8 Contact

Guangzhou Wondfo Biotech Co., Ltd. declares that the warranty will only be guaranteed under the condition that the user completely follows the instructions published by manufacture. Otherwise, Wondfo will not be responsible for any guarantee of indirect or consequential damages arising from the incorrect use

We have customer service organization with rich work experience. If you have any questions, suggestions or comments, please feel free to contact us.

Manufacturer: Guangzhou Wondfo Biotech Co., Ltd.

Address: No. 8 Lizhishan Rd., Science City, Luogang District, 510663, Guangzhou, P.R. China

Distributed by: Guangzhou Wondko Technology Co., Ltd.

Tel: +86 20-32293661

Fax: +86 20-32022032

E-mail: wondfo-vet@wondfo.com.cn

Web: www.wondko.com

物料编码: 13011933

项目名称: 动物Vcare-5000血气电解质分析仪说明书(143*210mm)英文V01



尺寸(长*宽*高): 142.5*210mm

颜色:  M:30 Y:100

 M:100 Y:70

材质: 封面157g双面铜版纸过哑膜,
内页105g双面铜版纸

工艺: 骑马订装订

折页方式: /

修改内容: ☐文字 ☐颜色 ☐尺寸 ☐工艺 ☐材质 ☐其他 ☒无

修改内容截图

改稿前编码: /

申请人: 何浩

设计师: 宋银

设计时间: 2021.05.06

稿件确认签名: