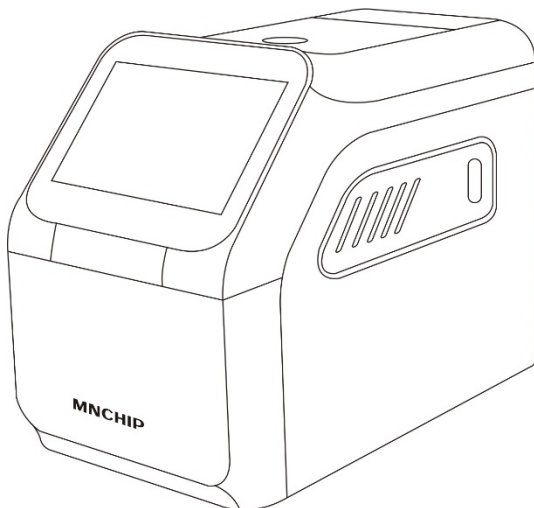


**MNCHIP**

# Pointcare PCR V1

Real-time PCR analyzer

## Operator's Manual



Please read the Operator's Manual carefully before use.  
For veterinary use only



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# Table of Contents

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Statements.....	3
Safety Precautions .....	5
<b>Section 1 General Information .....</b>	<b>8</b>
1.1 Intended Use.....	8
1.2 Introduction .....	8
1.3 Analyzer Specifications and Environmental Requirements .....	10
1.4 Technical Support .....	11
1.5 Symbols Used in Labeling .....	11
1.6 Transport and Storage .....	12
1.6.1 Transport .....	12
1.6.2 Storage.....	12
<b>Section 2 Installation.....</b>	<b>14</b>
2.1 Product Inspection and Damage Check .....	14
2.2 Unpacking .....	14
2.2.1 Unpacking the Analyzer.....	14
2.2.2 Functional Description of the Analyzer .....	14
2.2.3 Important Steps After Receiving the Analyzer .....	16
2.3 Installation.....	16
2.3.1 Setup Installation.....	16
2.3.2 Power Connection .....	16
2.4 Setup.....	17
<b>Section 3 Sample Analysis and Result.....</b>	<b>19</b>
3.1 System Description .....	19
3.2 Sample Requirements.....	19
3.3 Preparation of the PCR reagent reaction tubes .....	19
3.3.1 Sample collection.....	21
3.3.2 Sample processing.....	21
3.3.3 Sample aspiration.....	21
3.3.4 Sample loading.....	21
3.3.5 Testing .....	22
3.4 Sample Analysis.....	22
3.4.1 Negative and Positive Control Sample Testing Procedures.....	28
3.4.2 Sample test .....	24
3.4.3 Start of analysis .....	29
3.4.4 Reset the well information and cancel the detection .....	30
3.4.5 Review the report form and amplification curve .....	32
3.5 Results .....	35
3.5.1 Patient.....	36
3.5.2 Control.....	37
<b>Section 4 Configuring the Analyzer.....</b>	<b>38</b>
4.1 Analyzer Information .....	38

4.2 Changing Date and Time .....	38
4.3 Network Connection .....	39
4.4 Setting Sound .....	40
4.5 Setting Language .....	41
4.6 Setting Baud Rate .....	41
4.7 Report Layout .....	42
4.8 Factory Reset .....	43
<b>Section 5 Troubleshooting .....</b>	<b>44</b>
5.1 Electrostatic Discharge .....	44
5.2 Error Codes for Analyzer and Troubleshooting .....	44
<b>Section 6 Maintenance .....</b>	<b>46</b>
6.1 Cleaning the Analyzer .....	46
6.2 Cleaning the Air Filter .....	46
6.3 Overheat Protection System Inspection.....	48
6.4 Updating the Analyzer Software .....	47
6.4.1 Automatic Update .....	48
6.4.2 Manual Update.....	48
6.4.3 USB Drive Update .....	50
<b>Section 7 MNCHIP Medical Data Management Platform .....</b>	<b>50</b>
7.1 MMDMP.....	50
7.2 Installing the MMDMP .....	50
7.2.1 How to Obtain the Software? .....	50
7.2.2 Setting up the MMDMP .....	50
7.3 Login .....	52
7.3.1 Local login .....	52
7.3.2 Cloud login .....	52
7.4 ‘Main Screen’ Description.....	53
7.4.1 Inspection Info .....	54
7.4.2 Patient Info.....	56
7.4.3 Result .....	56
7.5 Setting .....	57
7.5.1 Basic Setting .....	57
7.5.2 Report Settings.....	59
7.5.3 Test Info Setting .....	59
7.6 Switching Data Transfer Methods .....	60
7.7 Acquisition, Backup, and Querying of Patient Data .....	60
7.8 Report Printing.....	61
7.9 Troubleshooting .....	62
<b>Section 8: FAQ.....</b>	<b>64</b>

## *Statements*

Thank you for purchasing the Pointcare PCR V1 Real-time PCR Analyzer. This manual is designed for operators who have completed the training course provided by MNCHIP or its authorized dealers. Please read and understand this Operator's Manual carefully before using the system.

Pointcare PCR V1 Real-time PCR Analyzer is a medical device suitable for animal testing. The symbols used in labeling comply with ISO 18113-3 standards.

### **Warranty Information:**

MNCHIP guarantees that the device is free from design, material, and manufacturing defects within the specified period, provided that you have submitted the product installation information to us.

### **To Obtain Warranty Service:**

- Contact the distributor from whom you purchased this product.
- If your issue is not resolved satisfactorily, reach out to MNCHIP Customer Service directly.
- For specific contracts with MNCHIP, contact Customer Service directly.

### **Limitations of Warranty:**

MNCHIP's obligation under this warranty is limited to repairing or replacing any parts returned by the purchaser at MNCHIP's discretion.

MNCHIP will not be responsible for any incidental, special, or consequential losses, damages, or expenses arising directly or indirectly from the use of this product.

### **This warranty shall become null and void if:**

1. The equipment has been misused, neglected, abused, damaged by accident, or affected by force majeure.

2. The equipment has been modified or repaired by anyone other than an authorized MNCHIP Service Representative.
3. The original MNCHIP serial number label or product identification markings have been altered or removed.
4. Any non-standard accessories have been attached or modifications made to the equipment.

Thank you for choosing MNCHIP products.

## *Safety Precautions*

This product conforms to European Directive 98/79/EC. To use the analyzer safely and effectively, please observe the following precautions. Using the system in a manner not specified by the manufacturer may impair its safety features.

### ***1. Safety Information***

The Pointcare PCR V1 Real-time PCR Analyzer has passed transportation tests in accordance with ASTM D4169:2016 DC13.

### ***2. Wi-Fi Compliance***

The analyzer complies with EN 300 328 V2.2.2:2019, EN 62311:2008, EN 301 489-1 V2.2.3:2019, and EN 301 489-17 V3.2.4:2020.

### ***3. EMC Information***

This product meets emission and immunity requirements as per EN/IEC 61326-2-6 and EN/IEC 61326-1 standards. It has been designed to CISPR 11 Class A specifications but may cause radio interference in certain environments; mitigation measures may be necessary.

It is the manufacturer's responsibility to provide electromagnetic compatibility information to users, while users must ensure a compatible environment for optimal device performance.

Evaluate the electromagnetic environment before operating this equipment and avoid using it near strong electromagnetic radiation sources (e.g., unshielded RF sources).

### ***4. Setup and operate the equipment correctly***

The installation environment of the analyzer must meet the requirements specified in this manual, and the operation of the analyzer must be carried out in accordance with the instructions provided in this manual.

**Warn:** *1、 The temperature of the cover during operation of the analyzer can reach up to 105 °C (221 °F). Please do not touch the top cover during operation and for 6 minutes after it has ended to avoid burns.*

*2、 Do not open the top cover during testing to prevent interference with the optical detection system from external light sources, which may affect the test results.*

*3、 Take measures to prevent liquid from splashing into the analysis chamber or*

*using liquid reagents such as nucleic acid decontaminants inside the chamber. If you suspect that the analyzer has been contaminated, please contact our customer service for assistance.*

## **5. Prevent electric shock**

Do not open the analyzer shell without our authorization to prevent liquid from entering the analyzer. In order to prevent electric shock and other safety accidents, if the liquid accidentally enters the analyzer, please contact the customer service personnel of the company before electrification.

## **6. Preventing Infection**

During the nucleic acid testing operation, protective gloves must be worn and directly contact the samples to be tested without protective gloves, which is a potential risk of biological infection. The PCR reagent reaction tube without biosafety treatment also has potential biosafety problems. Once the skin is in direct contact, please clean and disinfect the contact site immediately, and consult your doctor.

Please refer to occupational safety and biosafety guidelines in your country or region for more information:

- Laboratory Biosafety Manual (4th Edition), World Health Organization (WHO, 2020).
- Directive 2000/54/EC on the protection of workers from risks related to biological agents (applicable to EU member states).
- Standards and guidelines issued by your country's occupational safety and health authority (e.g., OSHA in the United States or equivalent agencies in other countries).

### **WARNING:**

*Operators must comply with national, regional, or local biosafety regulations, which may impose additional requirements beyond the above standards to ensure greater safety and compliance.*

## **7. Handling Reagents**

During normal use, operators should not come into contact with the dried reagents inside the PCR reaction tubes, unless the tubes are broken and the dried reagents are spilled. If this occurs, please avoid direct contact with the reagents as much as possible.

## ***8. Treating Waste***

Follow good laboratory safety practices when handling and disposing of used PCR reaction tubes.

For reference:

- Directive (EU) 2018/851 on waste management.
- CLSI document GP05 'Clinical and Laboratory Standards' available at <http://www.clsi.org>.

## ***9. WEEE Compliance***

The Pointcare PCR V1 Real-time PCR Analyzer complies with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). Disposal arrangements should be made through your distributor or MNCHIP at end-of-life.

## ***10. RoHS Compliance***

Analyze components for harmful substances such as Pb, Cd, Hg, Cr(VI), PBBs, PBDEs, DEHP, BBP, DBP, and DIBP content to ensure compliance with RoHS Directive 2011/65/EU (RoHS 2.0) and its amendments (Directive EU 2015/863).

## Section 1 General Information

### 1.1 Intended Use

The Pointcare PCR V1 Real-time PCR Analyzer used in conjunction with nucleic acid testing kits produced by Tianjin MNCHIP Technologies Co., Ltd. for quantitative determination of clinical molecular diagnostic test parameters.

### 1.2 Introduction

Real-time fluorescence quantitative PCR (Polymerase Chain Reaction) technique utilizes fluorescent dyes that can bind to DNA/RNA or fluorescent labels on primers/probes to directly reflect changes in the amount of PCR amplification products through changes in fluorescence signals. The variation in fluorescence signals is proportional to the amount of amplification products, and through the collection and analysis of fluorescence signals, the original template amount can be quantitatively analyzed.

Pointcare PCR V1 is designed for the rapid molecular diagnostics market, with a small and portable size, a simple and intuitive operating interface, and high sensitivity.

#### **Key components and features include:**

- Temperature control module (for thermal cycling control)
- Optical acquisition module (for fluorescence signal acquisition and measurement)
- Microprocessor (ARM core for system control and data acquisition calculation)
- Color touchscreen (interactive medium of operator and analyzer)
- Built-in Wireless Communication Module: Enables software upgrades and remote technical support.
- QR Code Scanner: Located on the side of the analyzer; used to scan information from the reagent and patient details.

The PCR reagents include PCR reaction tube (including lyophilized reagent and internal control), Disposable sampling swab, conical tubes, sample processing solution, and self-suction dropper.

### To perform an analysis:

1. Collection and preparation of samples (nasal, ocular, and oral swabs, fecal anal swabs, blood (EDTA or sodium citrate tube)).
2. Sample processing: Use a conical tube to pierce the cap of the sample processing solution tube. **For oropharyngeal, nasopharyngeal and eye swabs and feces anal swabs**, place the swabs into the sample processing solution and gently agitate until fully dissolved, then break off the tail of the swab. **For whole blood samples**, use a self-suction dropper to draw the sample from the blood collection tube, then add all the samples in the dropper to the sample processing solution tube, mixing gently.
3. Sample aspiration: Take out the self-suction dropper, insert it into the sample processing solution, and wait for 3 seconds for automatic sample aspiration to complete.
4. Open the cap of the PCR reaction tube, insert the self-suction dropper into the PCR reaction tube, gently press the airbag on the top of the dropper to drain all the liquid in the dropper into the PCR reaction tube, close the tube cap tightly, and vortex twice with a vortexer. 10 seconds each time, and then centrifuge briefly. Centrifuge at a speed of 5000 rpm for 10 seconds.
5. Put the PCR reaction tube into the PCR analyzer for detection.

Once the analysis is complete, results can be viewed on the touch screen or printed using the external printer.

Connectivity options include an Ethernet port, USB port, and wireless network capabilities, allowing data transfer to external printers, computers, memory sticks, data clouds, or laboratory information systems/electronic medical records (LIS/EMR).

Detection time varies based on sample type and reagent combination but typically ranges 60 minutes.

*Note: This manual includes screenshots for reference only; actual screens may vary from those displayed here.*

### 1.3 Analyzer Specifications and Environmental Requirements

The following outlines the key specifications of the analyzer and the requirements for its operating environment:

- Analyzer Specifications
  - Dimensions: 210 mm (Length) × 125 mm (Width) × 175 mm (Height)
  - Weight: Approximately 1.5 kg
  - Operation Mode: Continuous operation
  - Light Source: LED with high power
  - Reaction Volume: 20 µL
- Environmental Requirements
  - Operating Temperature: The analyzer is designed for indoor use and functions optimally within a temperature range of 10°C to 30°C (50°F to 86°F).
  - Atmospheric Pressure: The device can operate at atmospheric pressures ranging from 86.0 kPa to 106.0 kPa, equivalent to altitudes up to 2000 meters (6562 feet).
  - Humidity: The recommended ambient humidity range is 40% to 85%.
  - Pollution Degree: Pollution Degree 2 (suitable for general industrial or laboratory environments)
- Power Requirements
  - Power Consumption: 65W
  - Input Voltage: The analyzer supports a wide range of main supply voltages, from 100 to 240 volts AC, with a frequency of 50–60 Hz.
  - Power voltage fluctuation range: ±10%

This specification ensures the analyzer operates reliably under the stated environmental conditions and power requirements. For optimal performance and longevity, it is important to adhere to these guidelines.










### 1.4 Technical Support





For questions regarding the operation of the Pointcare PCR V1 Real-time PCR Analyzer, please contact the Dealer’s Technical Support team.

- **Email:** service@mnchip.com

### 1.5 Symbols Used in Labeling

The following symbols are found on the analyzer or labelling:

Item	Description
	<b>Biological risks</b>
	<b>Caution. High temperature</b>
I / O	<b>International standard symbols, where "I" represents ON (Powered) and "O" represents OFF (Unpowered).</b>
	<b>Direct current</b>
	<b>Manufacturer</b>
	<b>Unique device identifier</b>
	<b>Please refer to the user manual or electronic user manual</b>
	<b>Caution. Refer to any accompanying documents</b>
	<b>Electrical and electronic equipment, Do not discard at will, please recycle</b>
	<b>Fragile, handle with care</b>

	<b>Keep dry</b>
	<b>This is the correct upright position of the distribution packages for transport and/or storage</b>
	<b>Distribution packages shall not be rolled or turned over</b>
	<b>Up to 6 identical transport packages can be stacked on the bottom package</b>

## 1.6 Transport and Storage

### 1.6.1 Transport

Pointcare PCR V1 Real-time PCR Analyzer has been tested and complies with ASTM D4169:2016 DC13 standards.

- **Transport Conditions:**
  - Ensure the product is transported in good condition, covered with canvas if necessary to prevent moisture and rain exposure.
  - Goods should be arranged orderly and compactly on the transport vehicle to prevent damage from shaking.
- **Safety Precautions:**
  - Do not transport with flammable, explosive, or corrosive materials in the same vehicle.
  - Protect product components from rain, snow, liquid exposure, or mechanical damage during transportation.

### 1.6.2 Storage

- **Storage Environment:**
  - Temperature: 0°C to +40°C.
  - Humidity: Not exceeding 85%.
- **Storage Recommendations:**
  - Products should be kept in their original packaging to maintain protective measures.

- The storage area must be protected against moisture, dust, shock, and corrosion.
- It is recommended to install air conditioning and adequate lighting in the storage facility.

## Section 2 Installation

### 2.1 Product Inspection and Damage Check

Before packaging and transportation, the analyzers undergo strict inspections by our professional staff. Products are transported to the installation site via a designated transportation company.

Upon receiving the analyzer, please carefully inspect the outer package for the following potential damages before unpacking:

- Apparent deformation
- Signs of immersion
- Impact marks
- Evidence of being opened

If any damage is found, do not open the product. Immediately inform our after-sales service personnel or local dealers.

If no damage is detected, you may proceed with the installation steps outlined below.

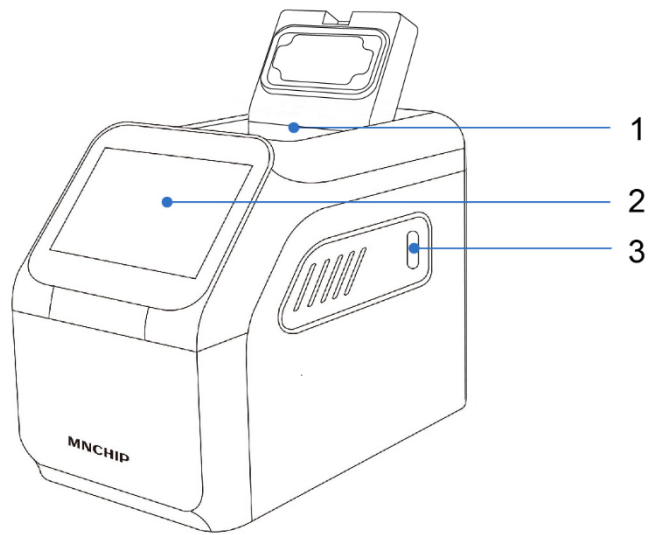
### 2.2 Unpacking

#### 2.2.1 Unpacking the Analyzer

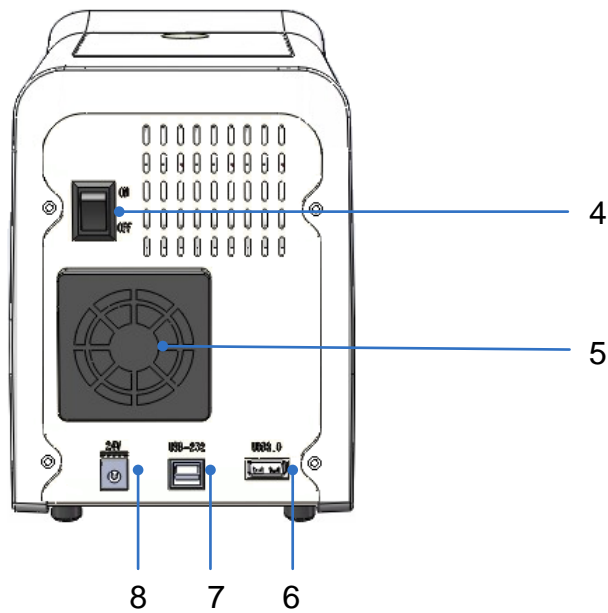
- Carefully remove the Pointcare PCR V1 Real-time PCR Analyzer from the shipping carton.
- Place the analyzer on a level surface that is clean and free of hair, dust, and other contaminants.
- Avoid positioning the analyzer in direct sunlight or near any heat sources.

#### 2.2.2 Functional Description of the Analyzer

The following figures illustrate the functional description of each part of the analyzer. Each component is labeled for clarity, allowing you to understand its purpose and operation.



The front of the analyzer



The rear of the analyzer

NO.	Item	Function
1	Sample chamber	Place for the samples to be tested in the analysis area.
2	Capacitive touch screen	Input operation instructions, output results
3	QR code scanner	Scan QR code information on reagents
4	Power switch	Turn on/off the analyzer
5	Fan	The analyzer detects the heat dissipation during operation

6	The USB 2.0 interface	Data transfer, connection to computer or printer
7	USB 232 Interface	Heat dissipation during operation
8	The 24V power supply input interface	Analyzer power supply input interface

### 2.2.3 Important Steps After Receiving the Analyzer

- **Component Verification:** Check the components received with the Pointcare PCR V1 Real-time PCR Analyzer against the Packing List to ensure that all items required for setup are included.

## 2.3 Installation

### 2.3.1 Setup Instructions

Set up the analyzer on a surface according to the following guidelines:

- Ensure it is on a level surface with no obstructions blocking the reagent disc drawer.
- Place it in an area free of vibrations and sudden jolts.
- Keep the surface free of hair, dust, and other contaminants.
- Maintain an ambient operating temperature of 10–30 °C (50–86 °F).
- Position it away from direct sunlight and any other potential heat sources.
- Ensure there is at least 30 cm (12 inches) of space from any wall to provide adequate ventilation and access to power connections and USB ports.

### 2.3.2 Power Connection

Plug the power cable into the analyzer. Connect the detachable power supply cord to the power adapter, then plug it into a grounded electrical outlet.

**Caution:**

- DO NOT use improperly rated power cords or adapters.
- To prevent power surges or drain, DO NOT plug the analyzer into the same circuit as a centrifuge or any other high-current device.

- MNCHIP recommends using a surge protector similar to those used for computers.

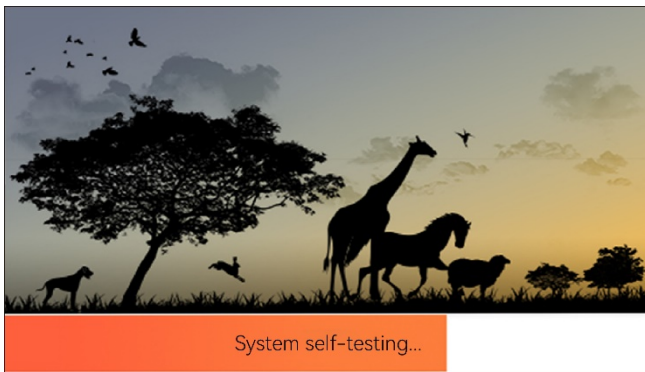
## 2.4 Setup

Plug the power cable into the Analyzer. Connect the detachable power supply cord to the power adapter, then plug it into a grounded electrical outlet.

*Note: This manual includes screenshots for reference only; actual screens may vary from those displayed here.*

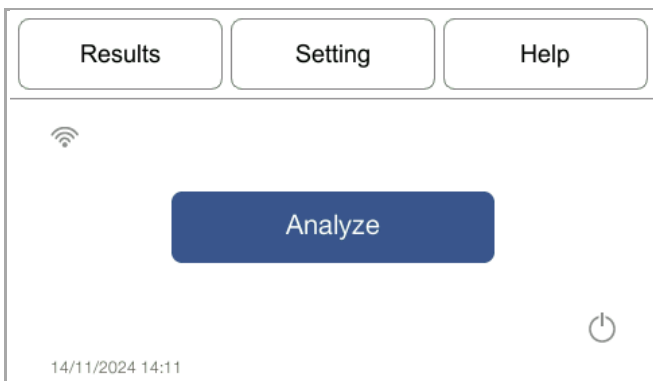
**Caution:**

- To prevent power surges or drain, DO NOT plug the analyzer into the same circuit as a centrifuge or any other high-current device.

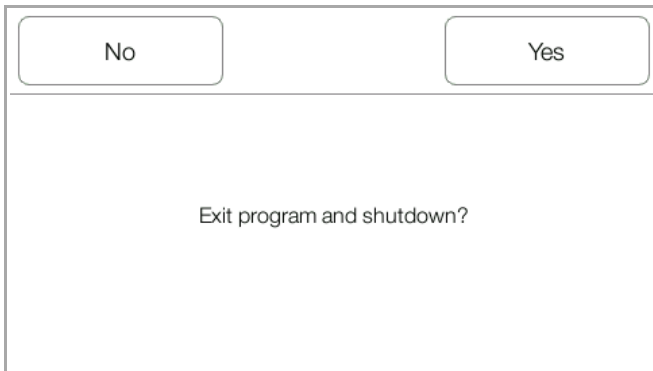



1. Press the Power button to turn on the analyzer.
2. During the self-test and warming period, the display will show the image on the left.

*Note: The analyzer may require additional time for the heaters to reach operating temperature in low ambient temperatures.*



3. After successfully completing the self-test and reaching the operating temperature. The display will show the image on the left.
4. Check the analyzer's date and time to ensure they are correct. If adjustments are needed, please refer to **Section 4.2**, 'Changing Date and Time' for detailed instructions.



5. To shut down the analyzer, press the ‘  ’ on the home page, then turn off the power button.

6. The analyzer can be connected to an external printer for printing patient and control results. Please ensure the printer is compatible and follow the manufacturer's instructions for connection.
7. The reference ranges are preset in the analyzer.

## Section 3 Sample Analysis and Result

### 3.1 System Description

1. The Pointcare PCR V1 Real-time PCR Analyzer used in conjunction with nucleic acid testing kits produced by Tianjin MNCHIP Technologies Co., Ltd. for quantitative determination of clinical molecular diagnostic test parameters. Familiarize yourself with the system before running samples.
2. Real-time fluorescence quantitative PCR (Polymerase Chain Reaction) technique utilizes fluorescent dyes that can bind to DNA/RNA or fluorescent labels on primers/probes to directly reflect changes in the amount of PCR amplification products through changes in fluorescence signals. The variation in fluorescence signals is proportional to the amount of amplification products, and through the collection and analysis of fluorescence signals, the original template amount can be quantitatively analyzed. The analyzer and encoded calibration data found on the QR code located on the reagent pouch.
3. Results are stored in memory and can be printed using an external thermal printer or downloaded to a personal computer for use with the MNCHIP Medical Data Management Platform (MMDMP). The touch screen display provides intuitive communication with the analyzer, showing procedural instructions, indicating the status of the analyzer, and presenting any error messages. For details on error messages, refer to **Section 5**.

### 3.2 Sample Requirements

Referring to DB32 / T 3762.1-2020: The collected samples can be tested immediately; if stored at 2-8°C, it should not exceed 3 days ; or stored at -20°C for no more than one month. It can be stored for a long time at -70°C. Avoid repeated freezing-thaw cycles.

### 3.3 Preparation of the PCR reagent reaction tubes

#### 3.3.1 Sample collection

- Oropharyngeal, Nasopharyngeal and eye swab: use a disposable sampling swab to gently swab secretions from the mouth, nose, or under the eyelids.

*Note: Oropharyngeal, nasopharyngeal and eye swab: If patients' oral or nasal ulcers is bleeding, please try to avoid collecting blood, or you can directly collect secretions under the eyelids for testing.*

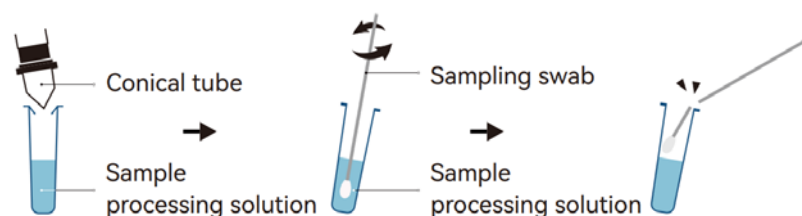
- Fecal anal swab: Use a disposable sampling swab to collect pet's fecal sample or swab pet's anus.
- Whole blood sample: Take the patient's whole blood into an anticoagulated blood collection tube (EDTA or citrate treated), and immediately mix by slowly inverting 8-10 times.

*Note: Whole blood sample: Avoid vigorous mixing of whole blood samples that may cause hemolysis of the samples.*

*Lyme disease, Leishmania: It is recommended to use EDTA for anticoagulation and blood collection.*

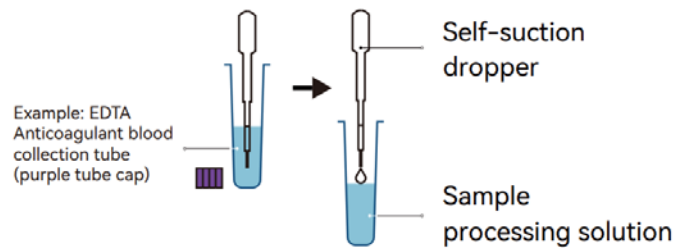
### 3.3.2 Sample processing

Take out the Sample processing solution tube and the conical tube, turn the head of the conical tube downward, and pierce the aluminum foil sealing the Sample processing solution tube; for oropharyngeal, nasopharyngeal and eye swabs and feces anal swabs, please quickly put the swab into the Sample processing solution tube, stir appropriately to fully dissolve the sample on the swab into the sample processing solution, and break off the tail of the swab.



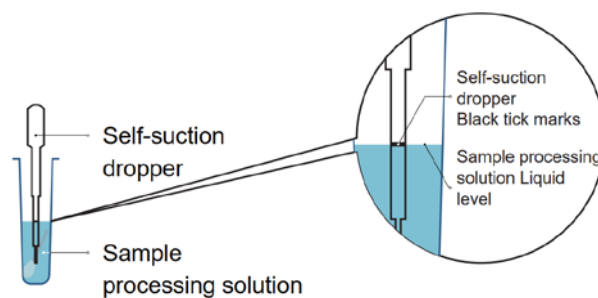
Whole blood samples need to use a self-suction dropper to draw the sample from the blood collection tube, then add all the samples in the dropper to the Sample

processing solution tube, and remove the tip of the conical tube. Combine it with the sample processing liquid tube and mix slowly to avoid leakage.



### 3.3.3 Sample aspiration

- Take out the self-suction dropper, **hold the head gently without pressing the air bag**, and extend it into the Sample processing solution tube or the anticoagulation tube below the liquid level until the black scale line is flush with the liquid level. Stay for 3 seconds and slowly remove it. At this time, it will self-prime (the liquid level in the dropper can be within 5mm above or below the black scale line).
- If a pipette is used to aspirate the sample, the aspirated volume should be 20 ul.

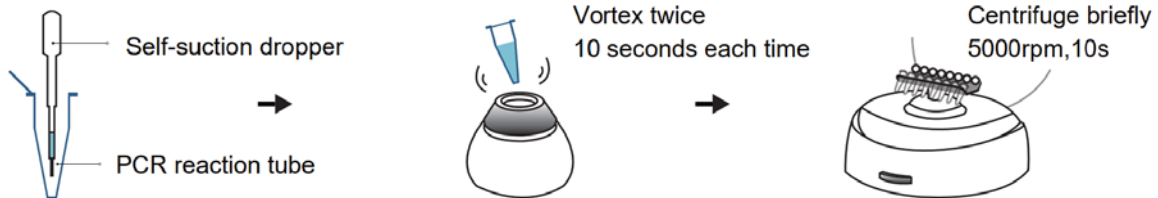


*Note: If the stool sample is turbid, let it sit for 3 minutes and then take the supernatant for testing.*

*The self-suction dropper can be reused for the same sample. You need to press the top air bag to completely drain the liquid and air bubbles in the self-suction dropper before aspirating.*

### 3.3.4 Sample loading

Open the cap of the PCR reaction tube, insert the self-suction dropper into the PCR reaction tube, gently press the airbag on the top of the dropper to drain all the liquid in the dropper into the PCR reaction tube, close the tube cap tightly, and vortex twice with a vortexer. 10 seconds each time, and then centrifuge briefly. Centrifuge at a speed of 5000 rpm for 10 seconds.



*Note: If the solution is not vortexed thoroughly, there may be a risk of false negative/positive results*

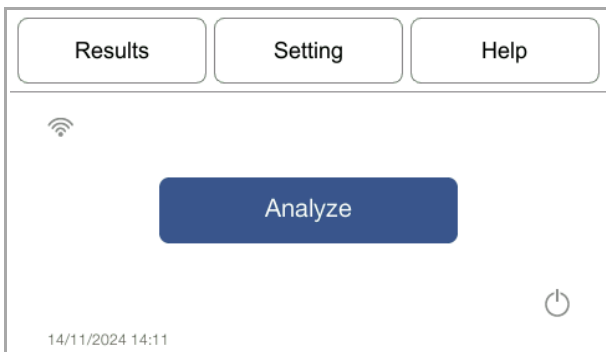
### 3.3.5 Testing

Put the PCR reaction tube into the PCR analyzer for detection.

*For information on applicable sample types for each PCR reagent, please refer to the corresponding kit Instructions for Use (IFU).*

## 3.4 Sample Analysis

This section includes detailed, step-by-step instructions for performing analyses using the analyzer.

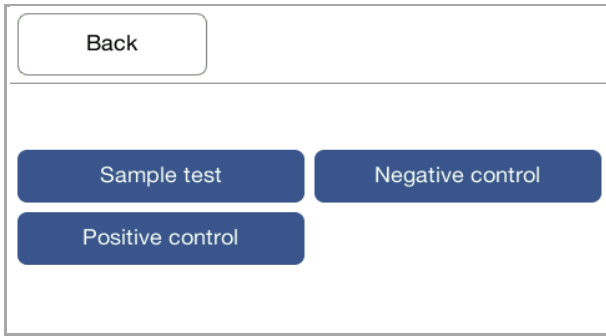


After successfully completing the self-test, the analyzer will display the main operating interface, as shown in the image on the left.

*Note:*

1. The analyzer's display screen is a touch screen, and all buttons can be operated by directly clicking on the screen.
2. To obtain a simplified guide on how to operate the analyzer for PCR testing, please click on the " Help" button on the main interface.

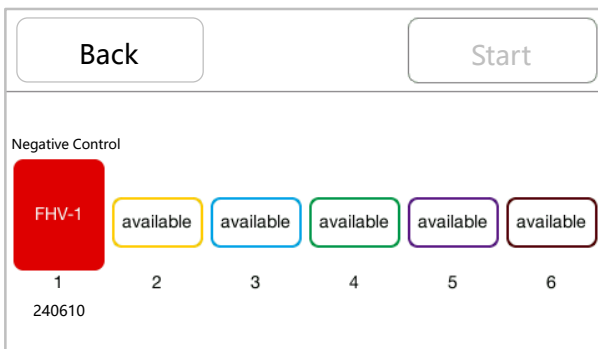
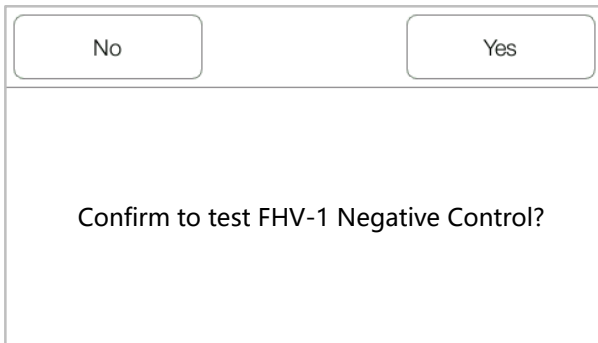
### 3.4.1 Negative and Positive Control Sample Testing Procedures



1. When performing tests for negative and positive control samples, select **"Negative Control"** or **"Positive Control"** in the testing category selection interface to enter the PCR reagent QR code scanning interface.



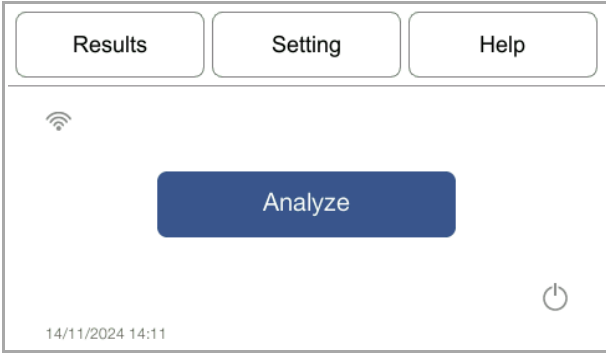
2. Scan the QR code of the reagents (please refer to step 2 in section 3.4.2: Scan the QR code on the reagent aluminum foil bag), and enter the detection project information confirmation interface. After clicking "Yes", the batch number and project name of the control will be displayed in the selected well for comparison.



3. Place the PCR reaction tube to be tested into the corresponding numbered slot on the analyzer's sample tray and wait for the test to run.

### 3.4.2 Sample test

#### Step 1: Enter pet information

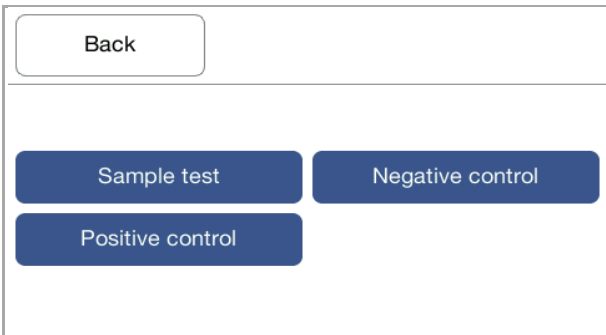


1. After successfully completing the self-test, the analyzer will display the main operating interface, as shown in the image on the left.

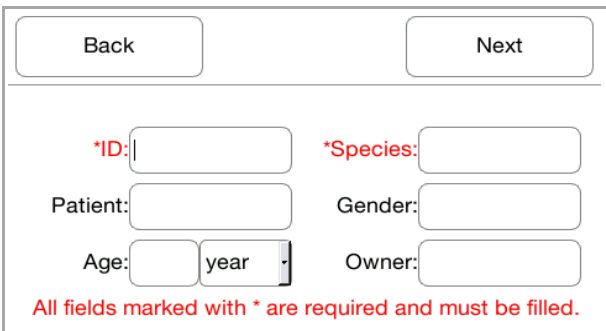
*Note:* 1. The analyzer's display screen is a touch screen, and all buttons can be operated by directly clicking on the screen.  
2. To obtain a simplified guide on how to operate the analyzer for PCR testing, please click on the " Help" button on the main interface.



2. Click on "Analyze" to enter the well configuration interface.

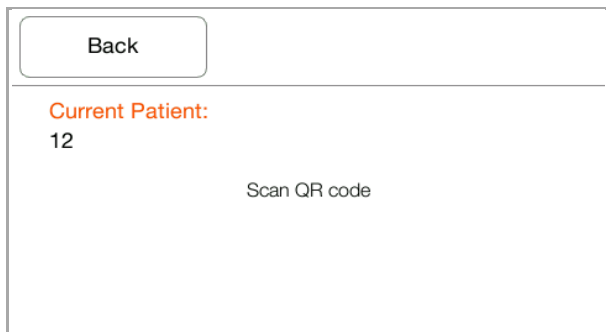


3. Click on any "available" button to enter the category selection interface.



4. Click "Sample test" to enter the pet information input interface. Click on the blank input space and the device interface will automatically display a keyboard for you to input pet information (\* indicates a required field), as shown in the image on the

left.

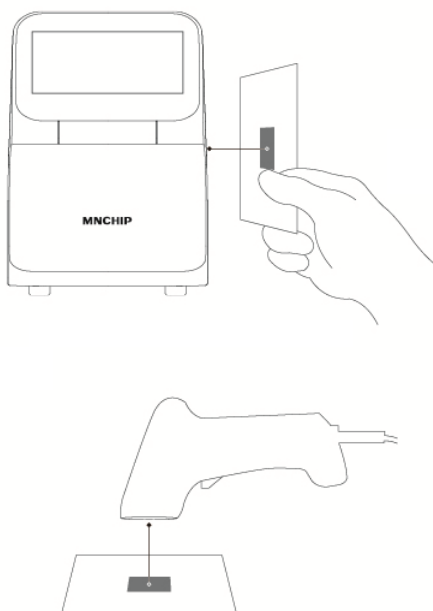


5. Click "**Next**" to enter the scanning QR code interface. The ID and name of the pet are displayed in the upper left corner of the interface.

### Step 2: Scan the QR

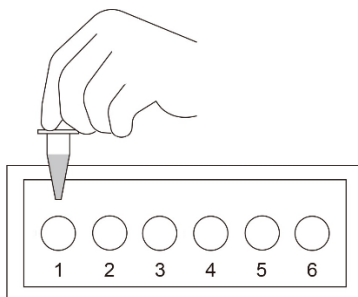
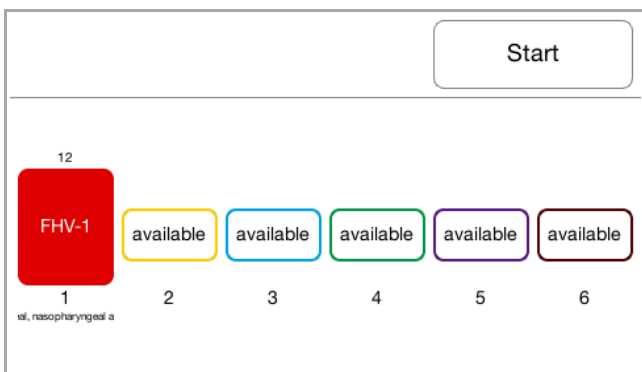
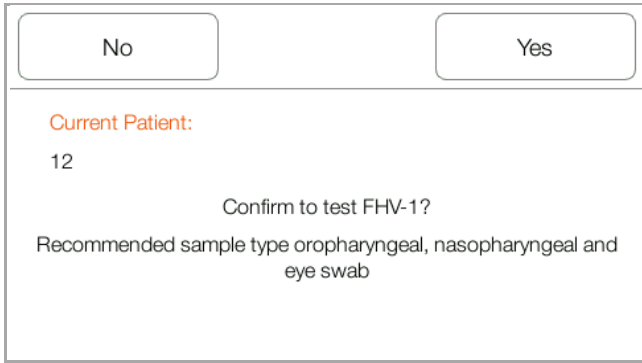
Scan the QR code on the label of the foil pouch. The QR code contains important disc information, including: Disc identification code, Lot number, Expiration date

*Note: Before scanning, ensure that the QR code label is flat and that there is sufficient light in the surrounding environment*



- a. Position the QR code in front of the QR scanner located on the right side of the Analyzer. Hold it steady to scan the QR code.
- b. Alternatively, it can be scanned by an external barcode scanner: keep the QR code on the reagent packaging still, as shown in the image on the left, and use a QR code scanner to scan the QR code on the packaging. The scanner will emit a "beep" sound to indicate a successful scan.

Step 3: Confirm the test information and place the PRC reaction tube into the analyzer's chamber

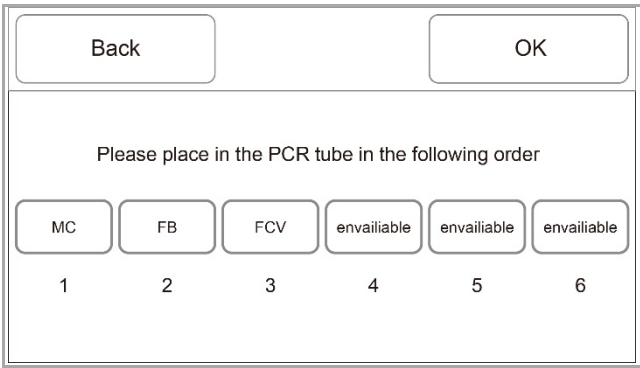


1. After completing the QR code scan, enter the interface for test kit confirmation and sample requirements.
2. Clicking "No" to cancel reagent information confirmation and replace the QR code with a new scan. If the PCR reagent has expired, the analyzer will prompt for replacement.
3. Clicking "Yes" returns to the wells configuration interface, displaying relevant wells information (the pet name, ID, test kit name, and sample type are automatically displayed in the "available" well that was previously selected), as shown in the image on the left.
4. Place the prepared PCR reaction tubes for testing, as prepared in **section 3.3**, into the corresponding numbered wells on the analyzer's chamber.

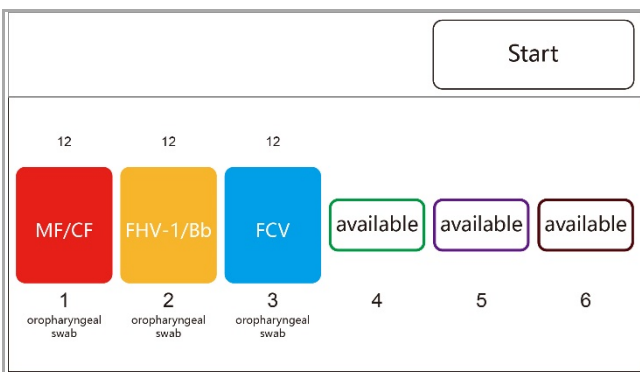
*Note: Please carefully confirm the position and numbering of each PCR reaction tube in the analyzer's chamber, ensuring that they are exactly the same as the sample numbering displayed on the equipment's well configuration interface.*

#### Step 4: Operation for multiplex samples and reagent kits

- Operation of multiplex reagent kits:

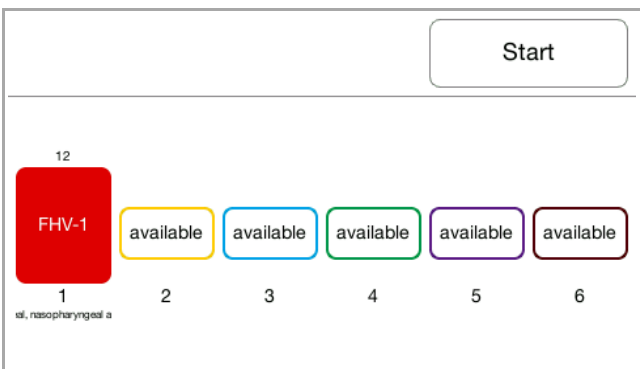


1. When the multiplex nucleic acid test kit for testing, input the pet information, scan the QR code on the reagent aluminum foil package and click "OK", to enter the PCR reaction tube sequence prompt interface. (Using the *Feline Respiratory Pathogen PCR Kit* as an example).

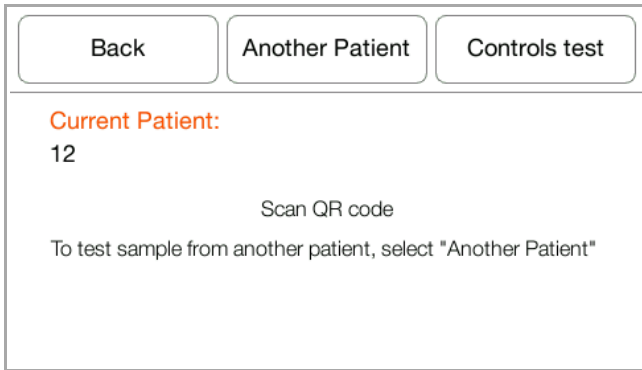


2. After preparing all the PCR reaction tubes in accordance with the instructions for 3.3, follow the prompts on the display screen to place the PCR tubes with corresponding English letters on the top into the designated numbered positions in the device's chamber in order. Once all tubes are placed, click "Ok" to return to the well configuration interface, where the relevant sample and test kit information for each position will be displayed.

• Operation of multiplex sample:



1. After completing the first three steps of section 3.4.2 for entering the information of the first pet sample, scanning the QR code, and confirming the test kit information, the system will automatically return to the well configuration interface. You can then continue to click on any "available" well to enable the multiple sample test function of the analyzer.

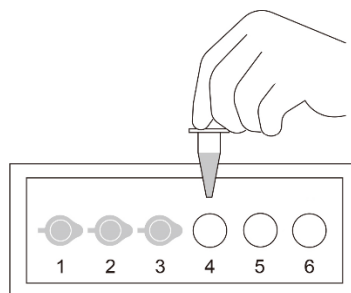


2. After clicking on "**available**" , the system will bring up the scanning interface again.

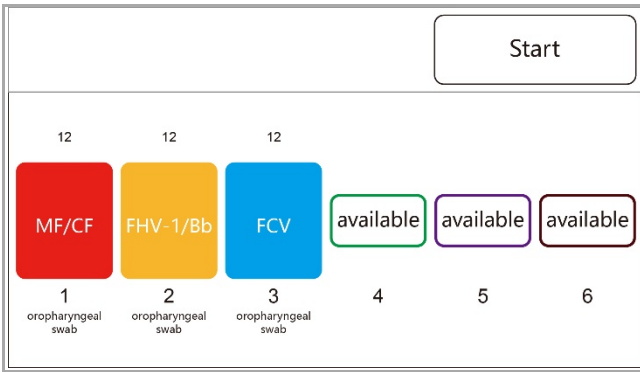
Please distinguish the following three scenarios based on the actual situation of the sample to be tested:

- To continue testing the current pet's sample: scan the new PCR reagent QR code directly, and enter the reagent kit information confirmation interface. The current pet's information and reagent kit name will be automatically filled in the selected well.
- To test another pet's sample: click the "Another Patient" button to enter the pet information input interface. After entering the pet information, scan the PCR reagent QR code, confirm the pet information and reagent kit, and the new pet information and reagent kit name will be displayed in the selected well

3. Prepare the PCR reaction tubes according to step 3.3 and place the processed PCR reaction tubes into the corresponding well in the analyzer chamber, then wait for doing nucleic acid test. Based on actual testing needs, you can continue to click on "**available**" well in the well configuration interface to perform testing operations for the current pet, the next pet, or the positive/negative control.

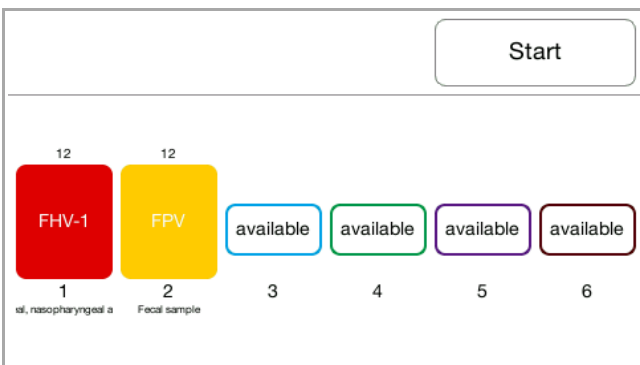


*Note: Please carefully confirm the position and numbering of each PCR reaction tube in the analyzer's chamber, ensuring that they are exactly the same as the sample numbering displayed on the equipment's well configuration interface.*



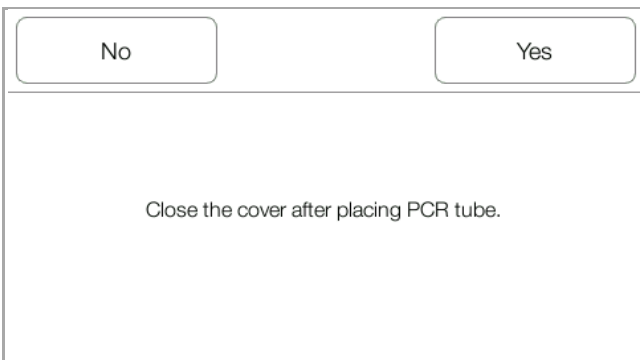
4. After completing the information entry of multiple pet sample, the interface displays as shown in the image on the left.

### 3.4.3 Start of analysis

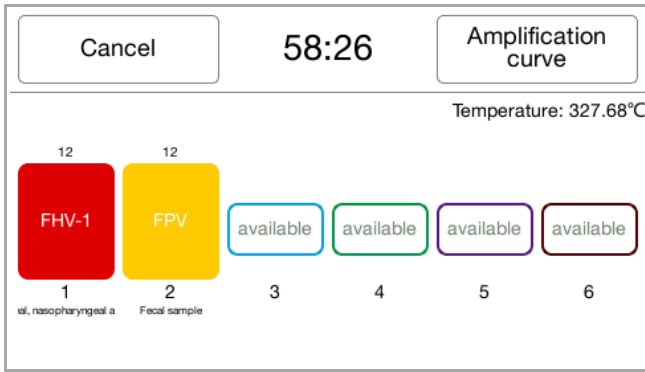


1. After completing the steps of the 3.4.2 sample analysis, the configuration of the samples and reagent kit information for each well is completed.

*Note: Before starting the detection, please make sure that all prepared PCR reaction tubes are inserted into the corresponding wells of the analyzer and the cover of the analyzer is closed*

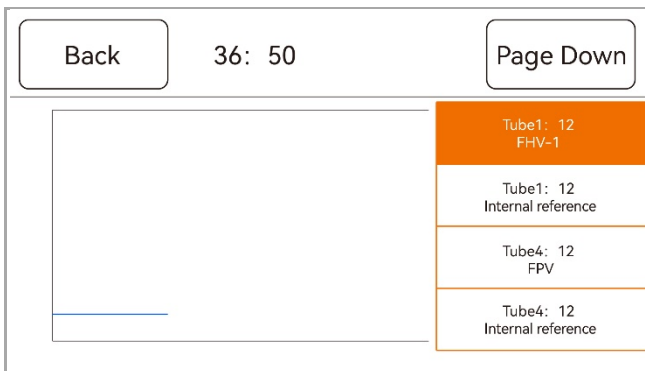


2. Click the “**Start**” button, and the system will prompt “Close the cover after placing PCR tube.”.



3. After confirming that the above operations have been completed, click the 'Yes', and the analyzer will start the nucleic acid detection process. It enters the detection countdown interface and is displayed.

*Warn: 1. Do not open the cover during the detection process, otherwise the optical detection system may be affected by external light sources, leading to inaccurate results.  
2. The cover will be in a high-temperature state (105 °C) during testing process. Do not touch it to avoid burns !!!*

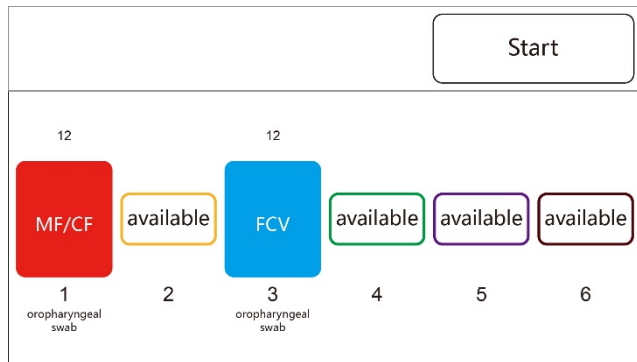
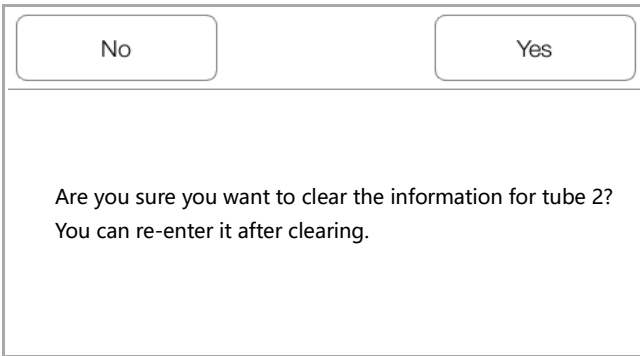


4. In the countdown interface, click on the "Amplification curve" button to view the real-time reaction curve. The interface is displayed.

5. The list on the right side of the interface shows the currently running test parameters. Clicking on any parameter will display its real-time reaction curve. If there are many parameters, clicking on "Page Down" will flip through to view other parameters. Clicking on the "Back" button will return to the detection countdown interface

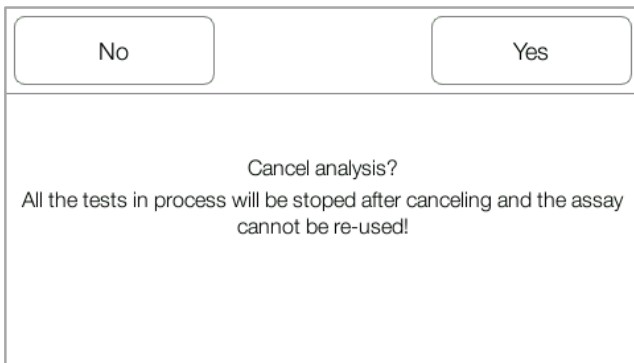
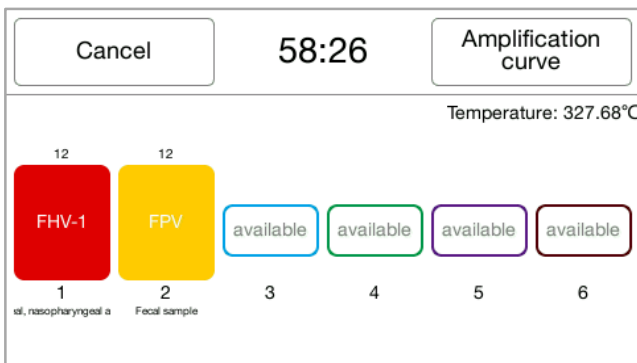
### 3.4.4 Reset the well information and cancel the detection

- Reset well information

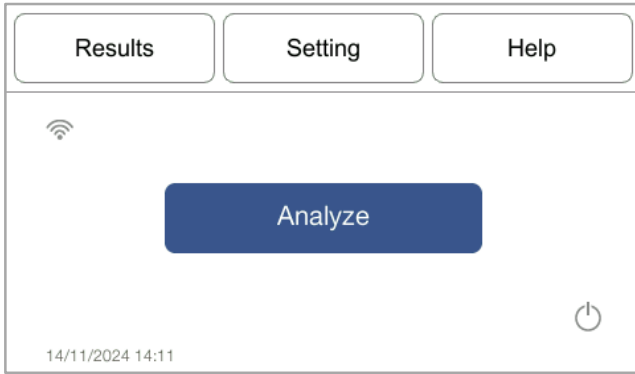


1. **After the configuration of the well information, before the nucleic acid detection, if you want to cancel the test for a certain well or re-enter the information for that well, you can click on the well that needs to be cleared. In the pop-up dialog box, select the "Yes" , and the information for that well will be cleared, and the well will return to the "available" state, allowing for re-configuration of the information for that well. The interface is displayed (using clearing the information for well 2 as an example).**

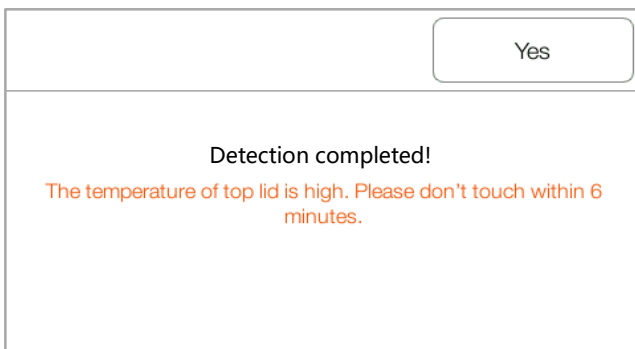
• Cancel the detection



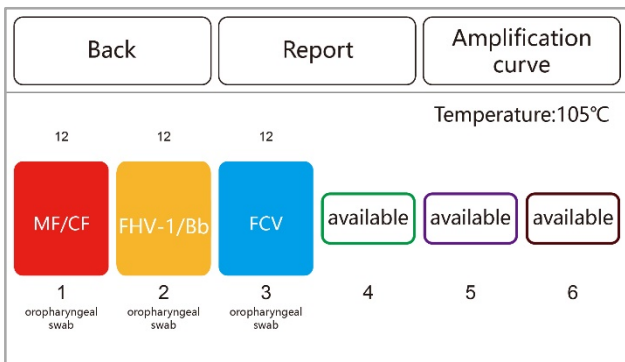
1. **Once the nucleic acid test process has started, if it is necessary to terminate the test, click the "Cancel" button on the test countdown interface to return to the home screen. The equipment will stop running, and all PCR reagents in the equipment will be discarded. After waiting for the analyzer to cool down, open the cover of the analyzer, take out the PCR reaction tubes, and dispose of them according to the laboratory biosafety regulations.**



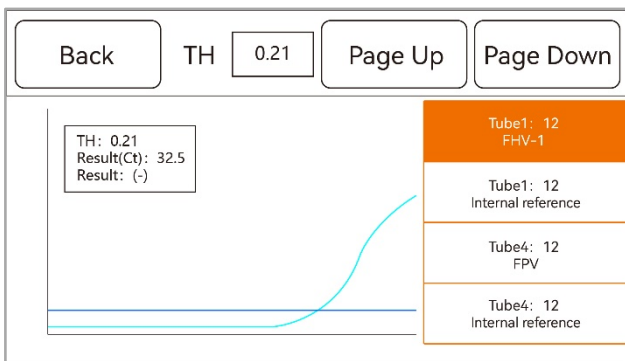
### 3.4.5 Review the report form and amplification curve



1. Start the analysis process according to **3.4.3**. After the countdown, the analyzer screen displays.



2. Click **"Yes"** to enter the view report form interface. You can view / print the report form or view the final response curve and modify the threshold value. The interface is displayed.



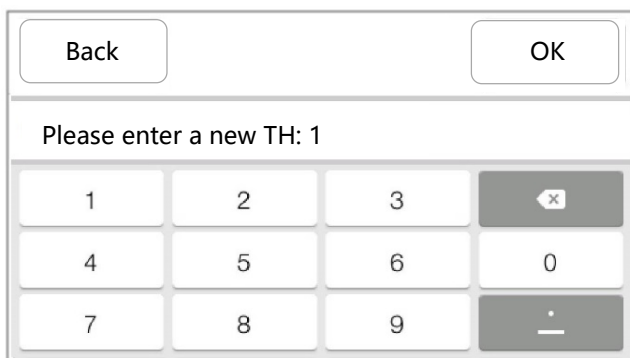
3. Clicking **"Amplification curve"** will take you to the interface where you can view the curve and modify the threshold.

By selecting a test parameter from the list on the right-hand side, you can view the amplification curve, threshold, Ct value, and result (-/+ ) of that parameter. If there are many parameter, click "**Page Down**" to view the curve of others on the next page.

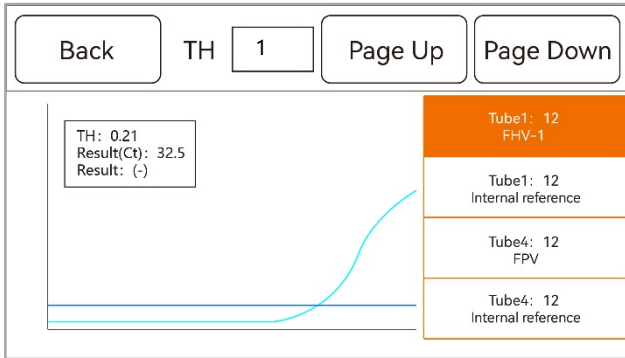
*warn:* 1. After the test is finished and the analyzer cover is cooled down, take out the PCR reaction tubes and promptly close the cover to avoid any liquid or other substances from entering the chamber and reaction wells, so as to avoid interference or damage to the analyzer.

2. If the analyzer is contaminated, please contact the customer service staff of MNCHIP and follow their guidance for operation. Please do not spray any liquid reagents such as nucleic acid cleaning agents inside the analyzer chamber to avoid damage caused by liquid splashing into the interior of the analyzer.

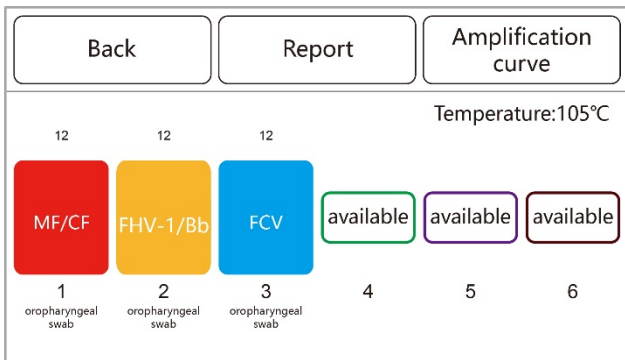
- In special cases, it may be necessary to adjust the threshold:
  - If the amplification result is an abnormal linear amplification, it is necessary to adjust the threshold to make it have no intersection with the amplification result.
  - If the amplification result shows a typical exponential amplification after the positive judgment interval, you can choose whether to adjust the threshold according to the actual situation.
- The specific method for adjusting the threshold is as follows:



1. Click on the space on the right of "**Threshold**" and then use the numeric keyboard that pops up to enter the new threshold value. Click "**OK**" to complete the modification of the threshold value for the selected test parameter. The Ct value and result (-/+ ) on the curve graph will also change accordingly. The modified Ct value and result will be displayed for this parameter on the report.



2. Click "**Back**" to return to the report interface.



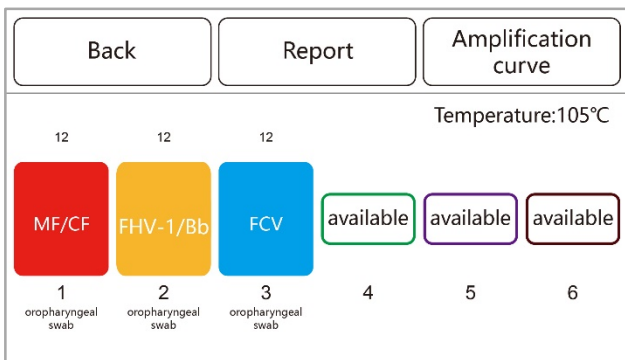
3. Click on "**Report**" to view the details of the report. Click on "**Page Up**" or "**Page Down**" to flip through the test reports for each pet.

The screenshot shows a control panel with buttons for "Back", "Page Up", "Page Down", and "Print". Below the controls is a detailed report for "Patient: Dog 1" with ID: 12345678901:

Item Name	Sample Type	Result(Ct)	Ranges	Indicator
Leptospira	Whole blood	32.5	> 36 or NoCt	Postive(+)
Internal reference	Whole blood	30	> 36 or NoCt	Postive(+)

Report DateTime: 2024-02-18 15:21  
The results relate only to the sample tested

4. If the test results are confirmed, click "**Print**" to print the current pet's test results through an external printer. Each report can be printed by flipping through the pages and clicking "**Print**" one by one. After the report is printed, click the "**Back**" button to return to the report page.



No
Yes

Are you sure you want to return to the homepage?  
All test items will default to save the current results upon returning to the homepage.

5. Click **"No"** , click **"Yes"** to confirm, and all test results and reports will be saved in the database for result inquiry or report printing through the MNCHIP management platform software on the computer. **The saved threshold values and results cannot be modified again.**

### 3.5 Results

The analysis results are stored in the analyzer database. They can be reviewed and printed in the **"Results"** on the main interface. When the analyzer is connected to a computer, the test result data can also be transferred to the storage path of the device mentioned above.

#### 3.5.1 Patient

Back

Patient

Control

Network upload

Data cable upload

Bluetooth upload

1. Click **"Results"** on the home screen, select **"Patient"** to enter the inquiry interface. You can search for reports based on the criteria of "ID", "Patient name", "From Date", and "To Date". The analyzer will display the search results in order of the test date. The operating steps interface as shown in the image on the left.

Back
Search

ID:

FromDate:

Patient name:

ToDate:

Back	PageUp	PageDown	Network upload
Item Name	Lot	Date	
Canine Four Respirat...	220780	03/06/2024	

Back

Date cable

Network

Bluetooth

2. Click on **"Upload"** on the report list interface, select the upload method, and upload the selected report to the MNCHIP data management platform.

Back	Export			
ID: 12345678901      Patient: Dog 1				
Item Name	Sample Type	Result(Ct)	Ranges	Indicator
Leptospira	Whole blood	32.5	> 36 or NoCt	Postive(+)
Internal reference	Whole blood	30	> 36 or NoCt	Postive(+)
Report DateTime: 2024-02-18 15:21 The results relate only to the sample tested				

3. Click on the **"Page Up"** or **"Page Down"** button to browse through the report list. Select the report you want to view, and the analyzer screen will display the detailed test result data.

4. Click the **"Export"** button to enter the Print/Upload interface. Select "Print" to print the currently displayed results. Select the correct upload method, and the analyzer will upload the test results of the report to the MNCHIP data management platform.

### 3.5.2 Control

Back

Patient

Control

Network upload

Data cable upload

Bluetooth upload

Back

Search

Item Name:  ▼

Lot:  ▼

FromDate:

ToDate:

Back

PageUp

PageDown

Item Name	Lot	Date
Canine Four Respirat...	220780	03/06/2024

Back

Export

ID: 12345678901      Patient: Dog 1

Item Name	Sample Type	Result(Ct)	Ranges	Indicator
FHV-1 Negative Control	Whole blood	32.5	> 36 or NoCt	Positive(+)

Report DateTime: 2024-02-18 15:21  
 The results relate only to the sample tested

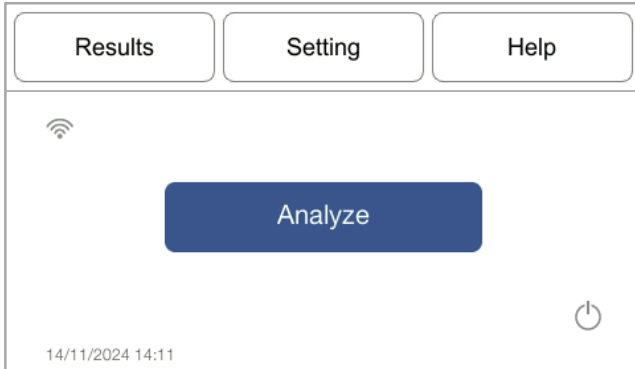
1. Click "**Results**" on the home screen, select "**Control** " to enter the inquiry interface. You can search for reports based on the criteria of "Item Name", "Lot.", "From Date", and "To Date". The analyzer will display the search results in order of the test date. The operating steps interface as shown in the image on the left.

3. Click on the "**Page Up**" or "**Page Down**" button to browse through the report list. Select the report you want to view, and the analyzer screen will display the detailed test result data.

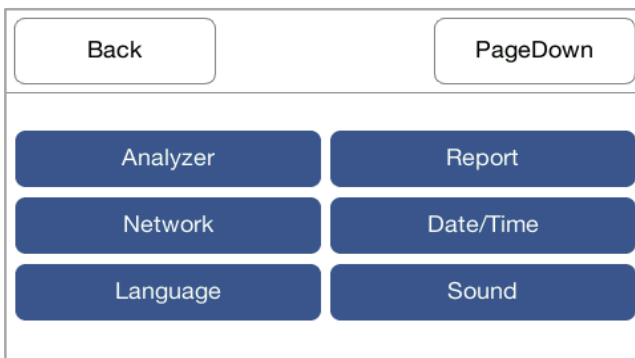
## Section 4 Configuring the Analyzer

This section describes how to configure the analyzer.

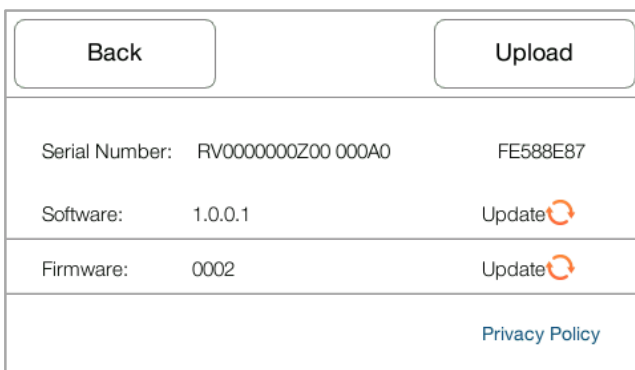
### 4.1 Analyzer Information



1. On the Main Screen, press **'Setting'**.



2. Then press **'Analyzer'**.

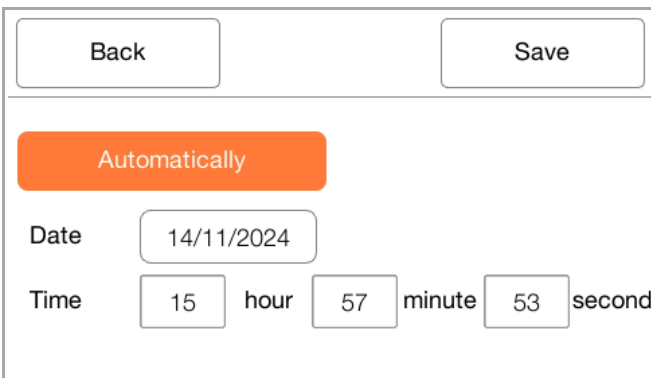


3. The display will show the analyzer information, such as serial number, the version of the installed software and upload log. Press **'Update'** to install the latest version. Click **'Privacy Policy'** to read the content.

### 4.2 Changing Date and Time



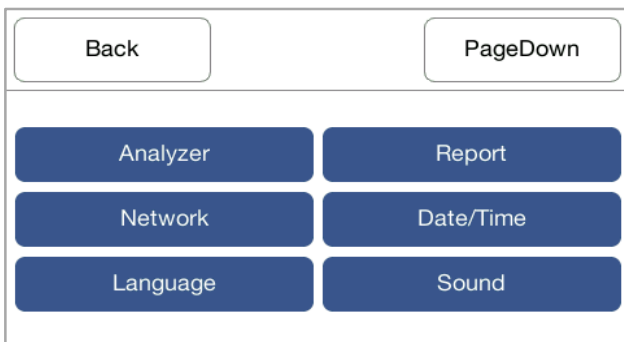
1. On the Main Screen, press '**Setting**', Then press '**Date/Time**'.



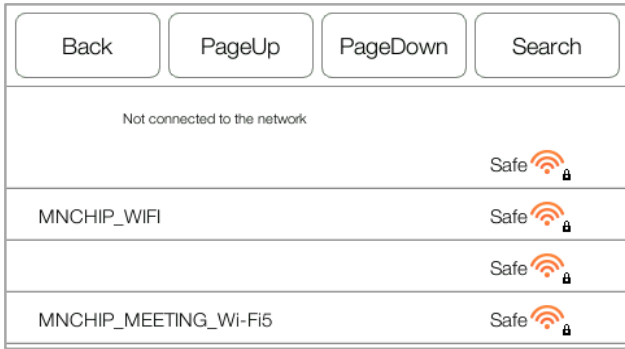
2. The display will show the Set Date/Time screen. The network time will automatically synchronize when connected.
3. Select year, month and day on the calendar, input the hour, minute and second.
4. Press '**Save**' when Date/Time is set. screen.

### 4.3 Network Connection

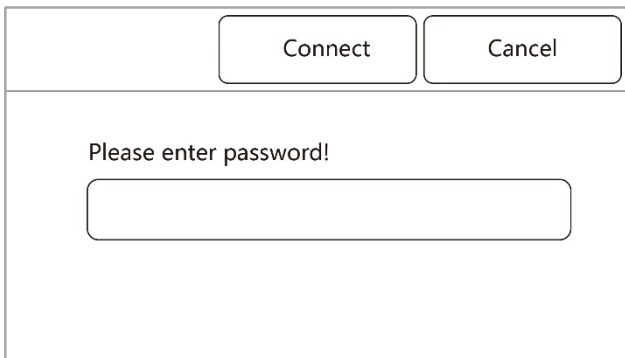
The analyzer features a built-in Wi-Fi module. Connecting to the internet allows for automatic software updates and the uploading of error logs to a cloud server. Technical support engineers can diagnose issues with the analyzer through the error logs.



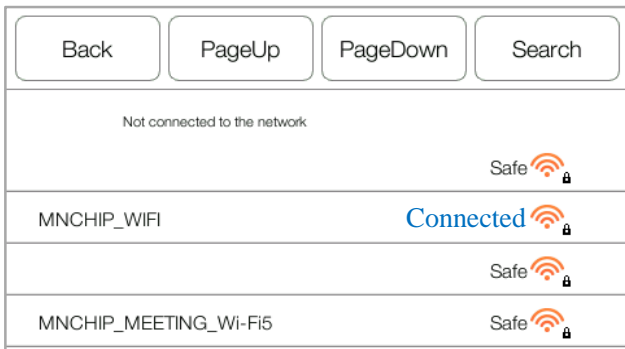
1. On the Main Screen, press '**Setting**' , Then press '**Network**'.



2. Press **'Scan'** to display the network list. Select a wireless network from the list.

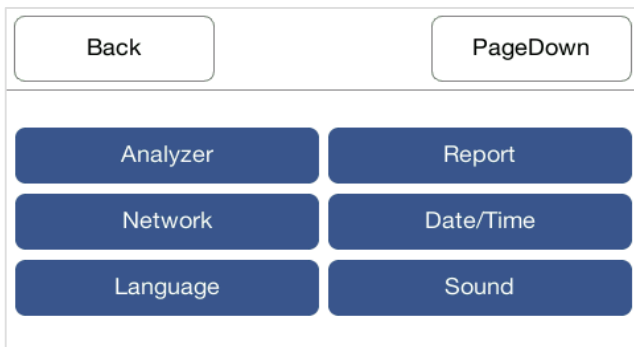


3. If you are connecting to a secured network, enter the password, Then press **'Connect'**.



4. The display shows the following.

### 4.4 Setting Sound

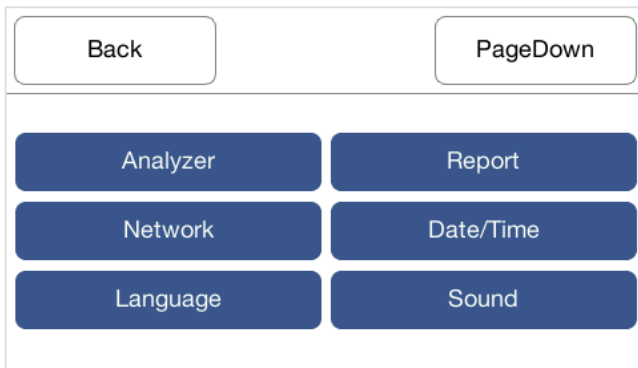


1. On the Main Screen, press **'Setting'**, Then press **'Sound'**.



2. The user can select **'Sound'**, **'Silent'**. **'Sound'** refers to the prompt tone when opening the analyzer and completing the analysis.

### 4.5 Setting Language



1. On the Main Screen, press **'Setting'**, Then press **'Language'**.

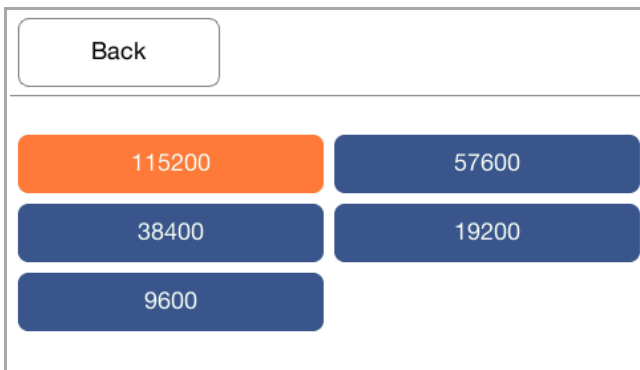


2. The user can select the language required.

### 4.6 Setting Baud Rate



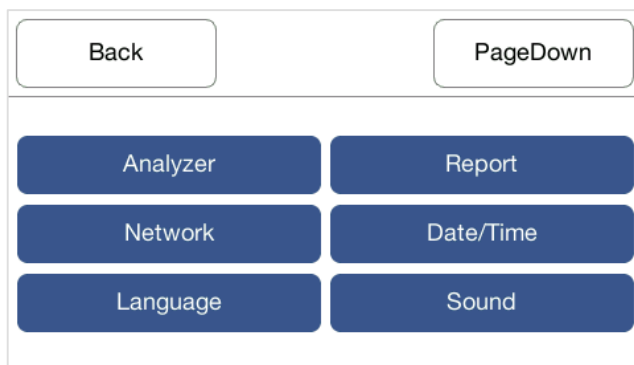
1. On the Main screen, press '**Setting**', then press '**Baud rate Setting**'.



2. The user can select one mode. The default value is 115200.

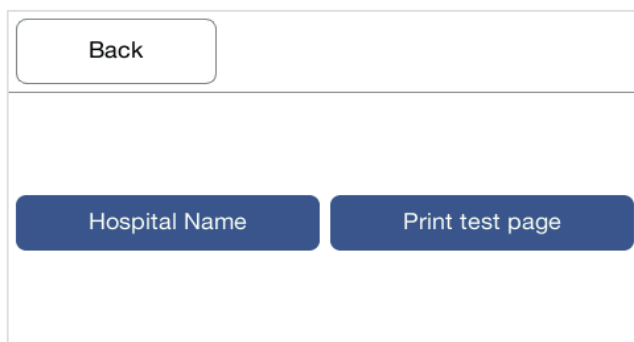
## 4.7 Report Layout

The operator can customize the reported content using the Report Layout feature.



On the Main Screen, press '**Setting**', then press '**Report**'.

### Hospital Name



1. Press '**Hospital Name**'.

Back

Please enter the hospital name:

ffff

2. Enter the hospital name to be displayed on the report. Then enter the telephone number and distributor company, and press 'Back'.

### Print Test Page

Back

Hospital Name

Print test page

1. Click "**Report**" access the report settings interface . Click "**Print test page**" to test whether the analyzer is successfully connected to the external printer and whether the printing function is normal.

### 4.8 Factory Reset

Back

PageUp

Baud rate

Factory reset (Erase all data)

1. Factory Reset: Restore factory settings to clear all data from the analyzer.

Back

Modify

OK

Please enter password:

## Section 5 Troubleshooting

### 5.1 Electrostatic Discharge

If the analyzer experiences an electrostatic discharge while running a sample, it may crash. Follow these steps:

- Cancel the test immediately if it times out or the countdown timer stops.
- Turn off the analyzer.
- Wait a few minutes, then turn it back on.

The analyzer should return to normal operation after this procedure.

### 5.2 Error Codes for Analyzer and Troubleshooting

The analyzer can display warning and error codes when issues arise. These codes help Dealer’s Technical Support diagnose the problem. Before contacting support, please follow these steps:

- Update the log.
- Provide the serial number.

Error code	Problem Description	Solution
0601	Motion module error	For any inquiries, please contact us:  <b>E-mail:</b> <a href="mailto:service@mnchip.com">service@mnchip.com</a>  <i>Note: Refer to the Maintenance Manual (Authorized dealers only).</i>
0602	Abnormal temperature of the upper cover	
0603	Abnormal monitoring temperature of the upper cover	
0604	Upper cover temperature overheating	
0605	Abnormal temperature of the sample chamber	
0606	Abnormal monitoring temperature of the sample chamber	
0607	Sample chamber temperature overheating	
0608	Optical system abnormality	
0609	Photoelectric switch malfunction	

0610	Control system abnormality	
------	----------------------------	--

## Section 6 Maintenance

The analyzer requires minimal maintenance. To ensure reliable operation, follow these steps:

- Clean the outside of the analyzer weekly with a mild detergent and a soft, damp cloth.
- Clean the air filter once a month.
- Overheat Protection System Inspection

### 6.1 Cleaning the Analyzer

#### Cleaning the Case

- Use a soft cloth dampened with one of the following:
  - Mild, non-abrasive detergent
  - 10% bleach solution
  - 30% isopropyl alcohol solution
- Do not spray or pour any cleaning solutions directly onto the analyzer.

#### Cleaning the Display

- Periodically clean the screen with a soft, lint-free cloth dampened with glass-cleaning fluid or window cleaner.
- To disinfect, use a 10% bleach solution:
  - Apply the solution to a lint-free cloth and then wipe the screen.

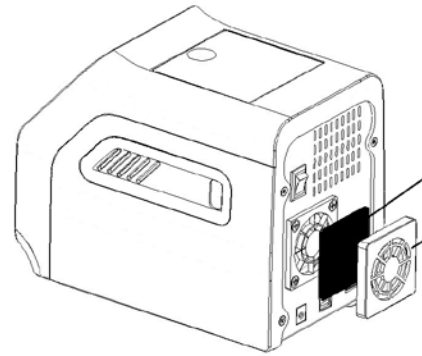
*Note: Avoid cleaners containing alcohol. Do not spray cleaner directly onto the display; always dampen the cloth first.*

### 6.2 Cleaning the Air Filter

The air filter at the rear of the analyzer should be cleaned once per month. If the analyzer is in a dusty or dirty environment, check and clean the air filter more frequently.

- Unplug the analyzer and disconnect the power cord from the rear.

- Open the fan cover and remove the black mesh filter.
- Wash the filter in warm, soapy water and ensure it is completely dry.
- Reinsert the clean, dry filter into the fan and secure the fan cover.
- Reconnect the power cord to the rear of the analyzer.
- Plug the power cord into a power source.



### 6.3 Overheat Protection System Inspection

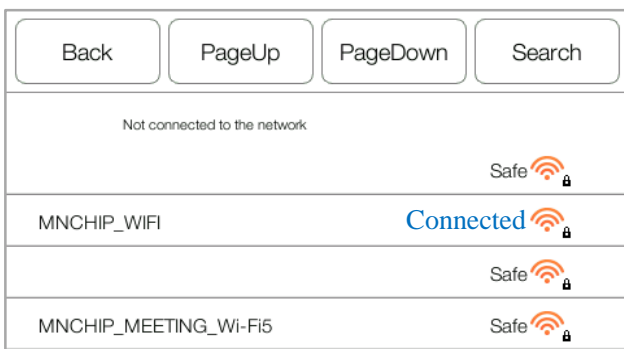
- **Inspection Frequency:** Each time the device is powered on, it will perform a self-test to verify the proper functioning of the overheat protection system.
- **Inspection Method (User-Executable Parts Only):**
  - Ensure proper ventilation of the device and check that the cooling vents are not blocked.
  - Check for any abnormal temperature alarms during device operation.

*Note: If the inspection is performed by the manufacturer, only the inspection frequency needs to be followed, and no user inspection is required.*

### 6.4 Updating the Analyzer Software

MNCHIP provides software updates for registered analyzers through its server. When a new software version is released, it will be uploaded to the MNCHIP server immediately.

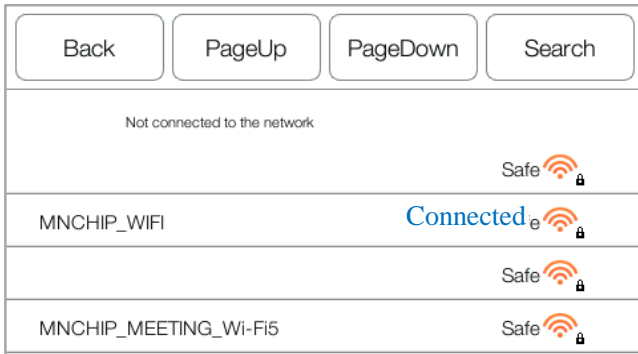
#### 6.4.1 Automatic Update



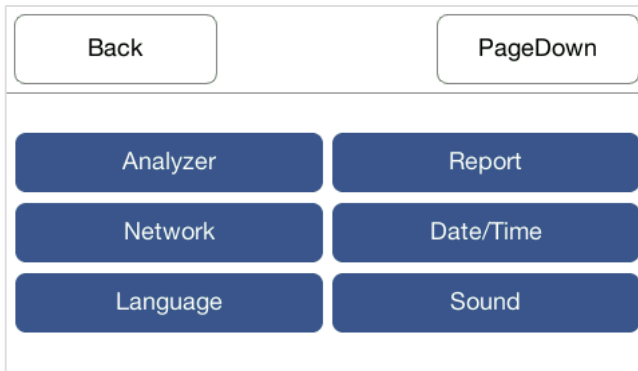
1. Connect to a Wi-Fi network by following the procedure outlined in **Section 5.3** 'Network Connection'.
2. When a new version of the software is released and the device is connected to the internet, the screen will prompt the user with update information, and the

user can follow the instructions to update the software.

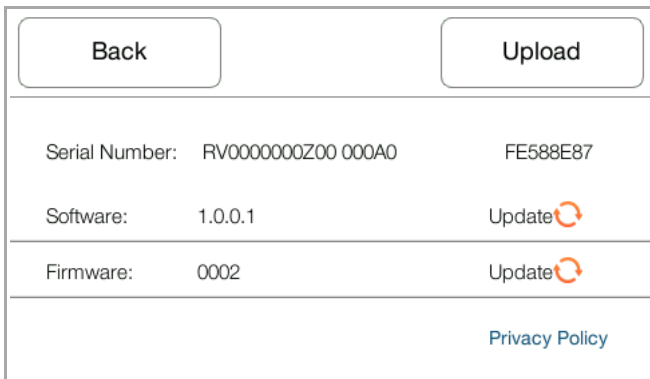
### 6.4.2 Manual Update



1. Connect to a Wi-Fi network following the procedure in **Section 5.3** ‘Network Connection’.



2. In Main Screen, press ‘**Setting**’, and then press ‘**Analyze**’.



3. Enter the device information interface and press ‘**Software Update**’ or ‘**Update**’ to update the software version or any hardware version.

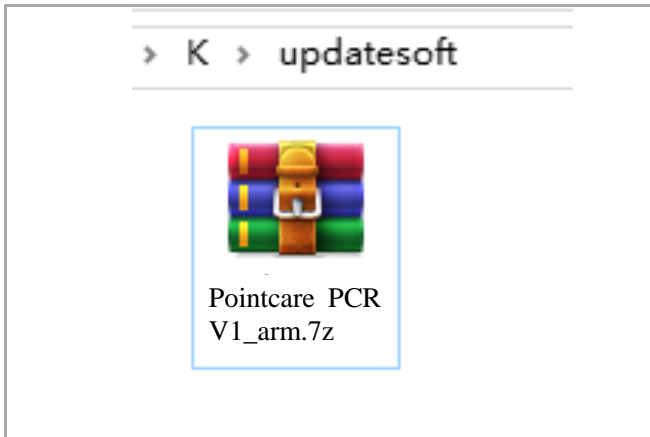
**Caution:** Do not disconnect the network or turn off the Analyzer until the update is complete.

### 6.4.3 USB Drive Update



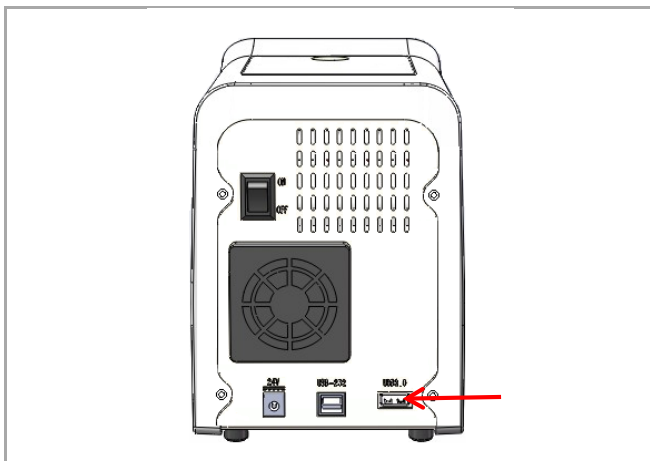
1. Alternatively, you can update the operating system using a USB drive.  
*Note: We strongly recommend using a Kingston USB drive, as it is compatible*

*with the Analyzer.*



2. Please contact Dealer's Technical Support to receive the software via email. After downloading, copy the software to the root directory of your USB flash drive named '**updatesoft**'. For example:

***K:\updatesoft\ Pointcare PCR V1\_arm.7z***



3. Insert the USB drive into the USB port located at the back of the device.
4. For subsequent operations, please refer to the above section.

***Caution: Please insert the USB drive only into the device to avoid virus infection.***

## Section 7 MNCHIP Medical Data Management Platform

### 7.1 MMDMP

The MNCHIP Medical Data Management Platform (MMDMP) is Windows-based software that interfaces with the MNCHIP Automated Chemistry Analyzer. Its primary role is to receive and manage data from the analyzer.

#### Key Functions:

- Set hospital name
- Select language
- Edit patient information
- Query and print results
- Configure printer settings
- Export test results
- And more

### 7.2 Installing the MMDMP

#### 7.2.1 How to Obtain the Software?

The MMDMP installer is available on the MNCHIP website:

1. Visit the website: <http://www.mnchip.com>
2. Navigate to the Reference Center.
3. Download the MMDMP installer.

*Note: If the above method is not convenient, please obtain the installer from an after-service engineer.*

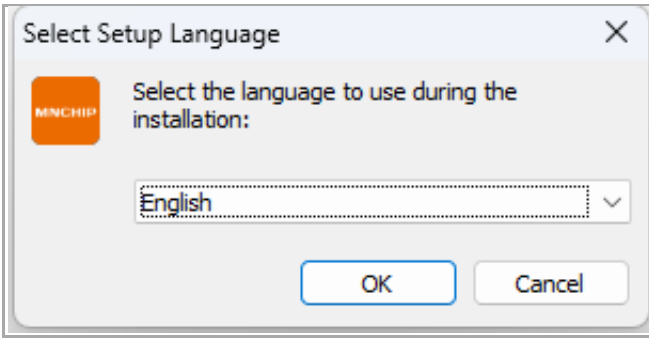
#### Contact Information:

- Email: [service@mnchip.com](mailto:service@mnchip.com)

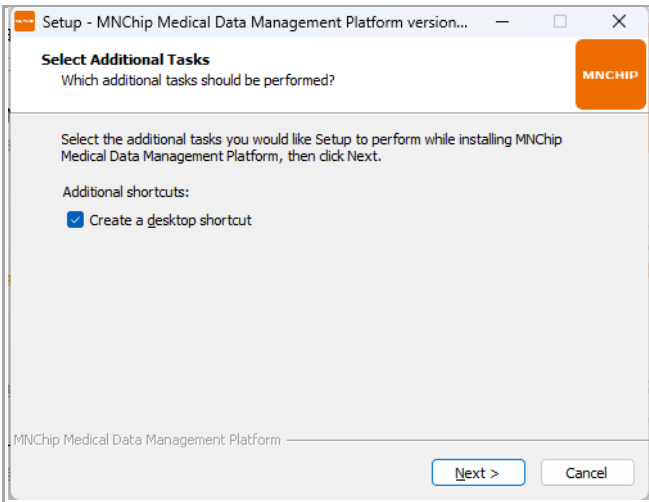
#### 7.2.2 Setting up the MMDMP

*Note: Some anti-virus software may affect the installation. For the installation process, it is recommended to turn off anti-virus software.*

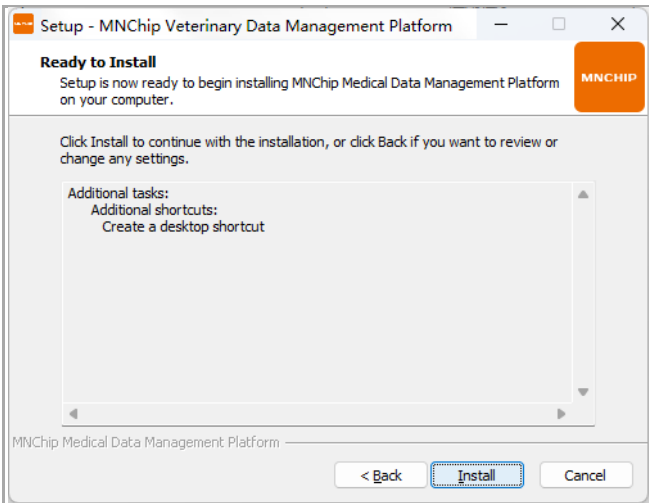
*Note: The MMDMP can be installed on the system of Windows7, Windows8, Windows10. Please do not install on Windows XP, otherwise it may cause some errors.*



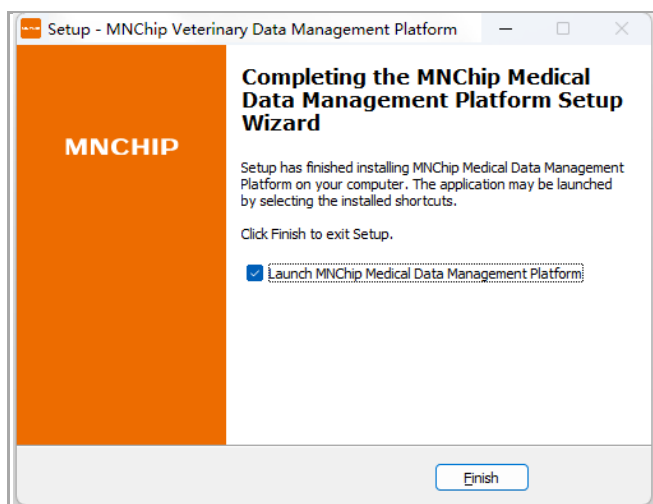
a. Start the installer, and an installation prompt will appear. Please select the installation language, then click ‘OK’.



b. Confirm whether to create a shortcut for the management platform software on the desktop. If you wish to create one, please check ‘Create a desktop shortcut’ and then click ‘Next’ to proceed.



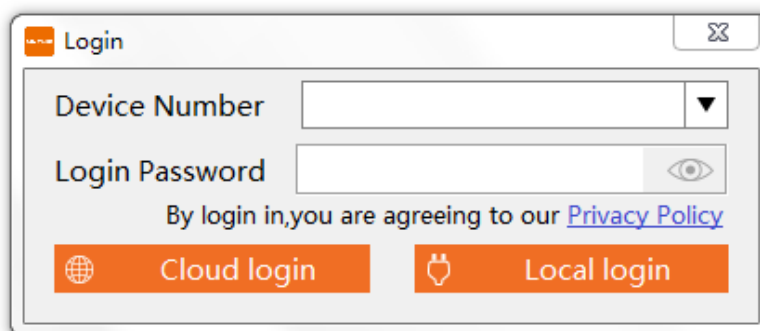
c. Enter the installation interface and select ‘Install’.



- d. Once the installation is complete, a confirmation dialog will appear. Click 'Finish' to complete the installation.

## 7.3 Login

Open the 'MNCHIP Medical Data Management Platform' to access the 'Login' interface.



### 7.3.1 Local login

Use the data cable to connect to the chemistry analyzer and PC. There is no need to enter any information, click 'Local login'.

**Note:** Before connecting via the data cable, make sure the analyzer is powered off or rebooted after the connection, otherwise data transfer is not possible.

### 7.3.2 Cloud login

When using cloud transmission, ensure that the chemistry analyzer and the PC with MMDMP are connected to the network. The device transmits data to the cloud server via Wi-Fi, and the MMDMP software downloads this data from the server to the PC.

To view the device ID and login password, navigate to 'Setting' → 'Chemistry analyzer' on the chemistry analyzer. Enter the complete device ID and login password in MMDMP, then click 'Cloud login'.

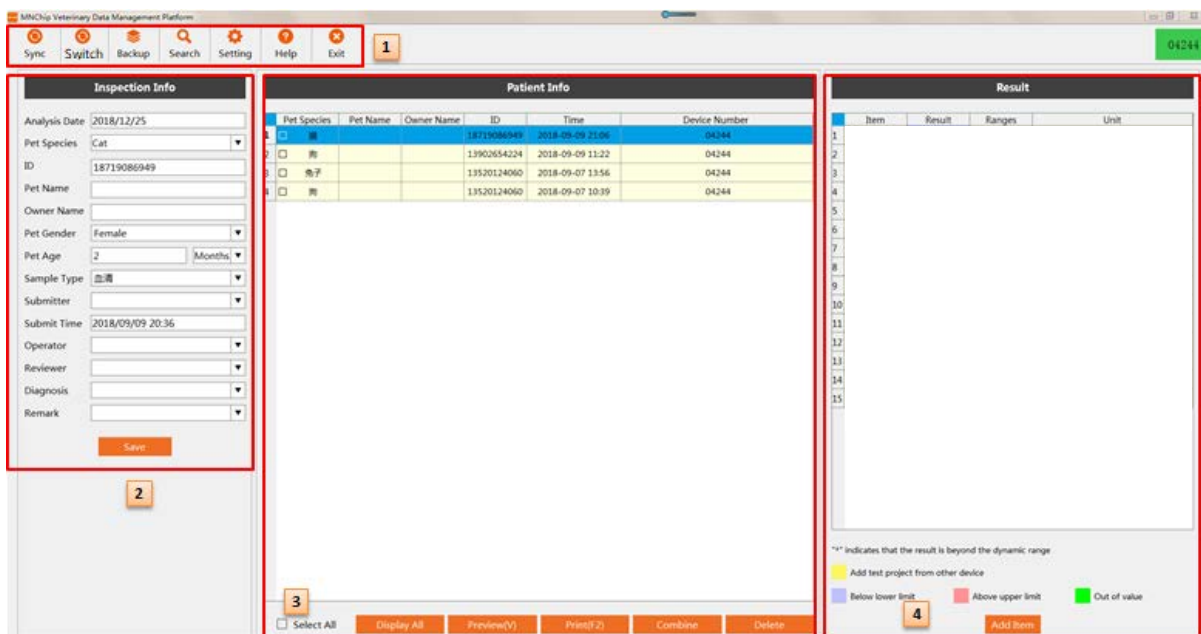
**Note:** When you reopen the management platform software, click 'Cloud Login'. The software will automatically connect to the previously matched device.

**Note:** If the 'Device Info' section does not show the login password, it means the device is not connected to the Internet. Please go to 'Setting' → 'Network' to reconnect.

## 7.4 'Main Screen' Description

The main interface of the MMDMP is divided into four functional areas, as indicated by the yellow symbols in the figure below:

- **Shortcut Toolbar :** Used for selecting and connecting to data interfaces, backing up and looking up data, setting up configurations, and accessing help.
- **Inspection Information Area :** Displays the currently selected patient information and allows for modifications to related details.
- **Data Selection Area (Patient Info) :** Primarily used for selecting a patient report to be printed.
- **Data Display Area (Result) :** Mainly shows the patient's results and ranges of the printed content.

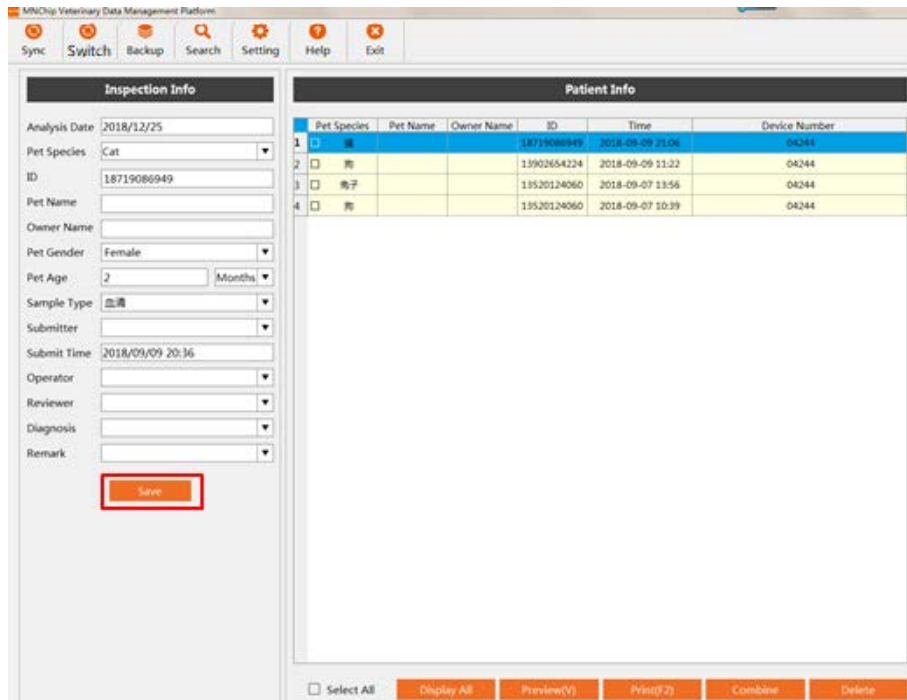


### 7.4.1 Inspection Info

Displays the patient information for the selected record. You can edit this information and click ‘**Save**’ to save the modified test details.

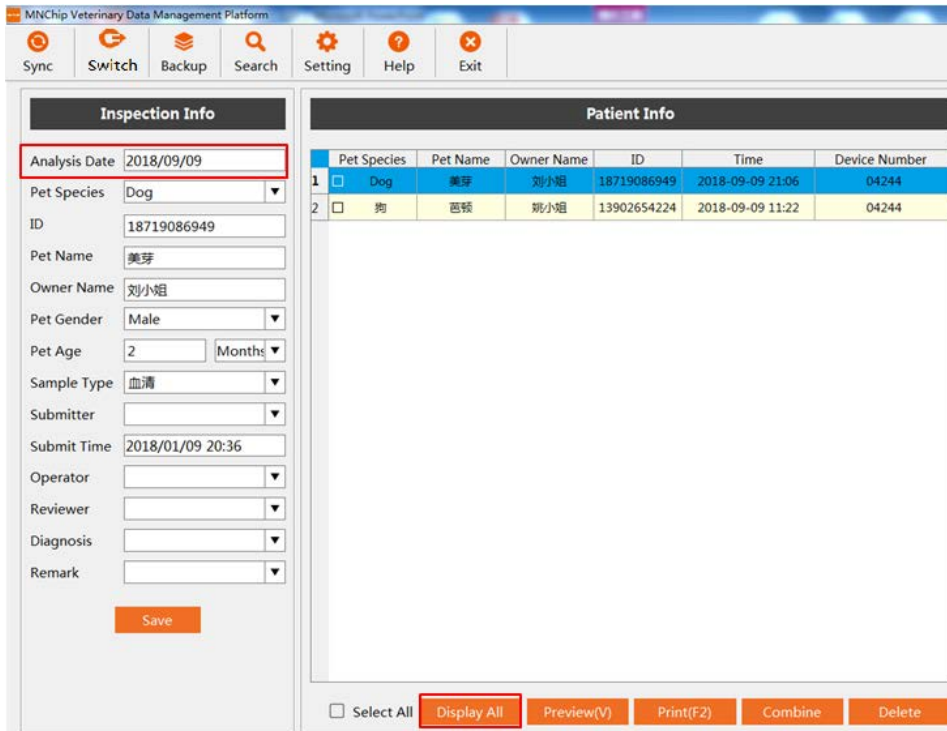
#### 1. Change inspection Information

Select a patient and update the basic information in the inspection area. Click ‘**Save**’ to finalize your changes.



#### 2. Display All

The ‘**Analysis Date**’ section on the home screen typically shows data for the selected date only. To view all test results, use the ‘**Display All**’ function.



### 3. Combine

When a patient has been tested with different, you can combine the test reports into one using the merge function. First, select the reports to merge, then click the ‘**Combine**’ function. The system will generate a new report.

	Pet Species	Pet Name	Owner Name	ID	Time	Device Number
37	<input checked="" type="checkbox"/>			227	2017-11-04 09:10	04244
38	<input checked="" type="checkbox"/>			227	2017-11-04 09:10	04244

### 4. Delete:

Select a result and click the ‘Delete’ function to remove it.

*Note: If you accidentally delete data, you can recover it by resynchronizing the data from the analyzer.*

**Inspection Info**

Analysis Date: 2018/09/09

Pet Species: Dog

ID:

Pet Name:

Owner Name:

Pet Gender: Male

Pet Age: Months

Sample Type:

Submitter:

Submit Time: 2018/09/07 10:09

Operator:

Reviewer:

Diagnosis:

Remark:

**Save**

**Patient Info**

	Pet Species	Pet Name	Owner Name	ID	Time	Device Number
1	<input type="checkbox"/> Dog	美芽	刘小姐	18719086949	2018-09-09 21:06	04244
2	<input type="checkbox"/> 狗	芭顿	姚小姐	13902654224	2018-09-09 11:22	04244
3	<input type="checkbox"/> 兔子	二皮	张小姐	13520124060	2018-09-07 13:56	04244
4	<input checked="" type="checkbox"/> 狗				2018-09-07 10:39	04244
5	<input type="checkbox"/> 狗			13520124060	2018-09-07 10:39	04244

Select All   **Display All**   **Preview(V)**   **Print(F2)**   **Combine**   **Delete**

## 7.4.2 Patient Info

The test record matching the query is displayed, and the test record of the day is displayed by default.

- Click 'Select All': select all test records.
- Click 'Display All': display all test records.
- Click 'Preview': Preview all selected test record reports, or click 'Quick Export' to export PDF.
- Click 'Print': print the selected test report, select the printer and set the print, then click 'OK' to print. Click 'Close' to modify the report form or cancel printing.
- Click 'Combine': Merge selected test records and generate new test records.
- Click 'Delete': cancel the selected test records.

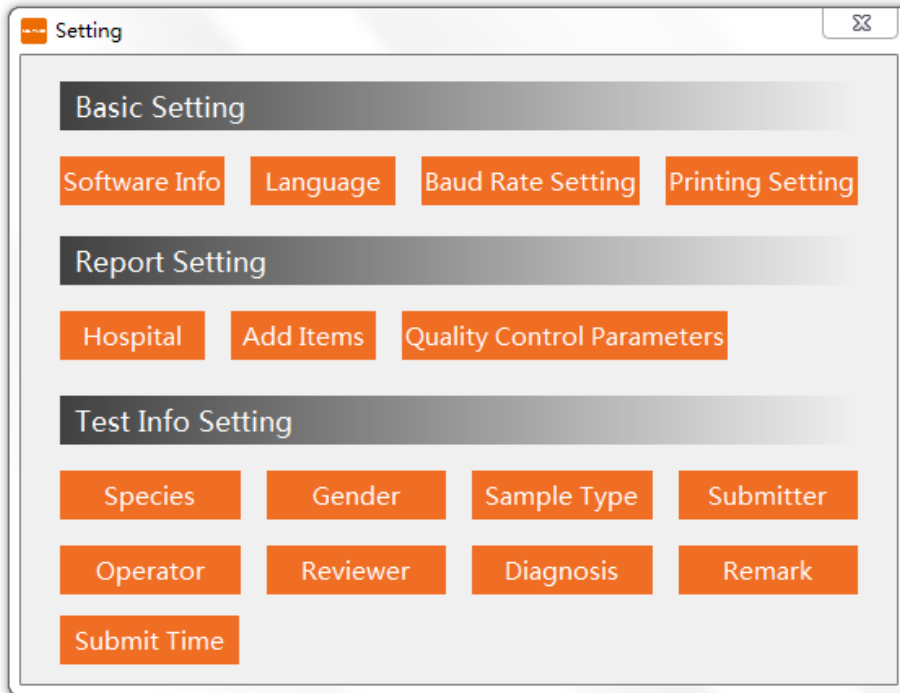
## 7.4.3 Result

The patient test results for the selected record are displayed.

- **Modify Test Results:** Operators can modify specific test results by double-clicking on the test value.
- **Add Test Items:** Use this option to add additional test items.

## 7.5 Setting

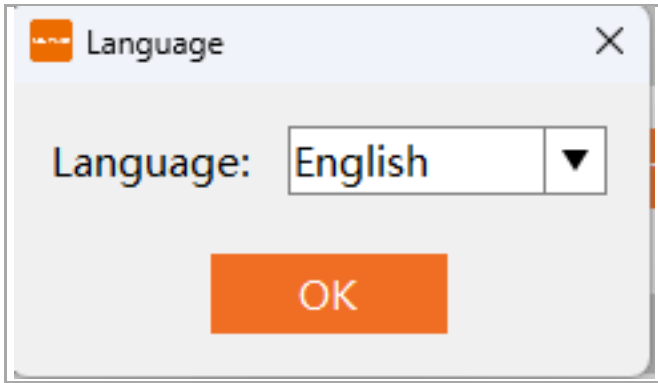
Click the ‘**Setting**’ button on the top menu bar of the management platform to access the settings interface.



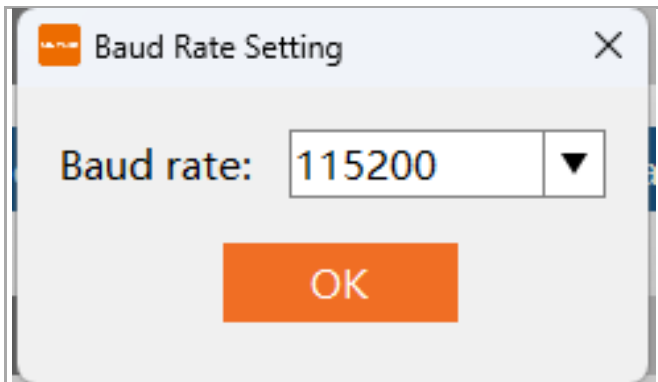
### 7.5.1 Basic Setting



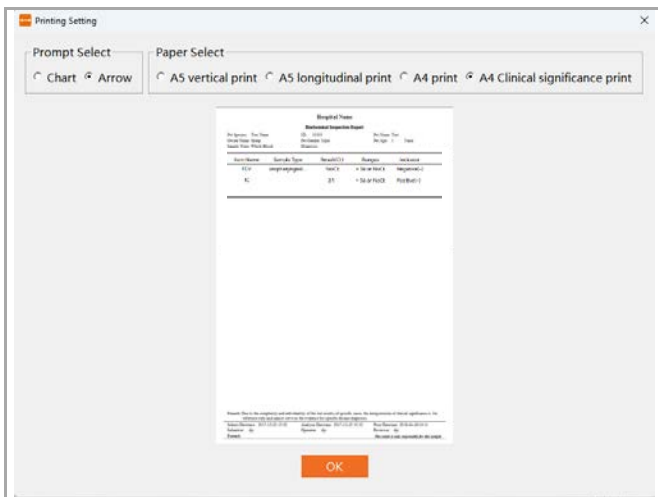
- Software Info:** Displays software information. Click ‘Software update’ to upgrade.



b. **Language:** Select your preferred language.



c. **Set Baud Rate:** Configure the baud rate for data transmission under 'Local login'.



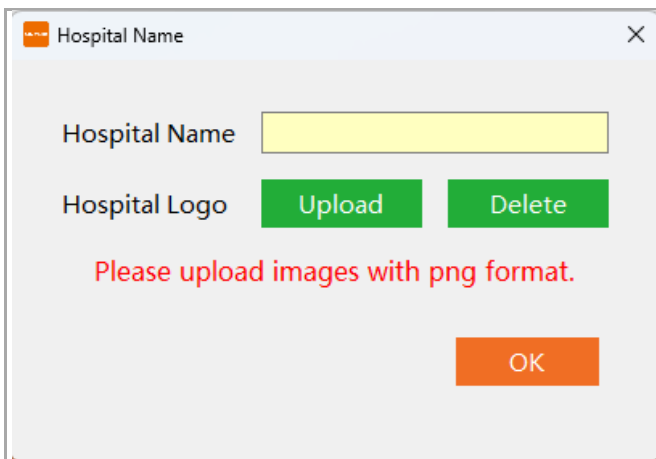
d. **Printing Setting:**

- **Prompt Select:** Choose between 'Chart' and 'Arrow'.
- **Paper Select:**

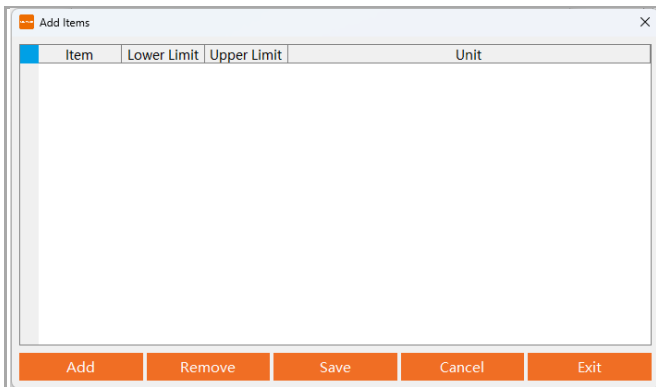
- A5 vertical Print (default): Insert A5 paper (21 cm wide, 14.8 cm high) in the printer to print a report sheet.

- A5 longitudinal print: Insert A5 paper (14.8 cm wide, 21 cm high) in the printer to print a report sheet.
- A4 Print: Insert A4 paper in the printer to print the report sheet.
- A4 clinical significance print: Prints with clinical significance of the test report; default choice is A4 paper.

### 7.5.2 Report Settings



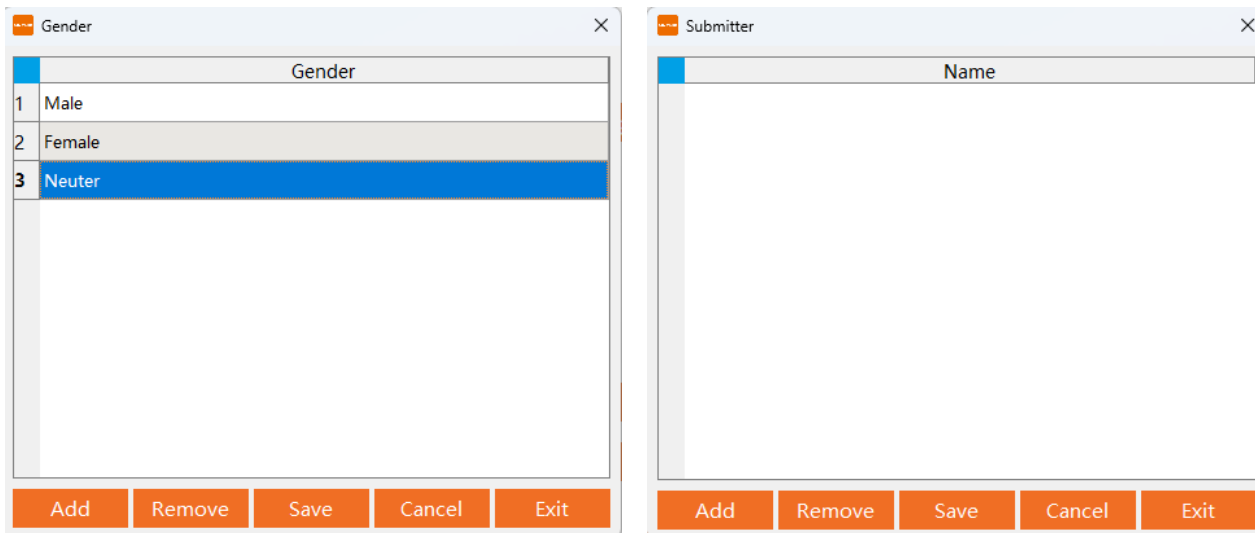
a. **Hospital name/Logo:** input the hospital name and logo.



b. **Add Items:** use this function to combine the test items from other devices into one report. After making changes, click ‘Save’ and then ‘Exit’.

### 7.5.3 Test Info Setting

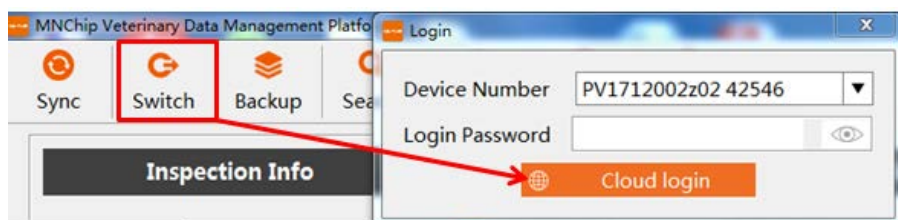
**Modify Test Info:** In the main interface, modify the ‘Test Info’. Hospitals can preset each item in the ‘**Test Info Settings**’ as needed, and these settings will be displayed in the report form.



### 7.6 Switching Data Transfer Methods

Click ‘Exit’: close the management platform software. Click ‘Switch’, the ‘Login’ screen will pop-up, follow the same steps as 8.3 Login.

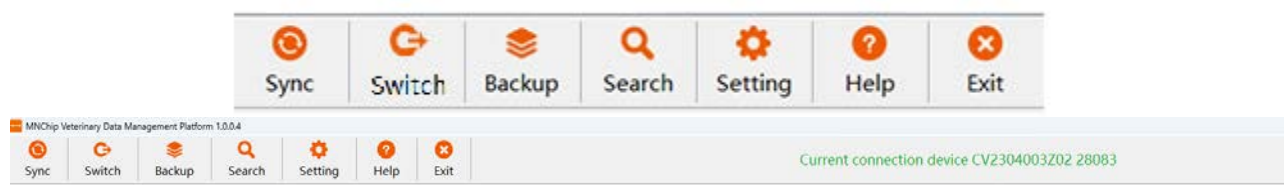
*Note: This function will only work under ‘Cloud Login’. The computer must be connected to the internet.*



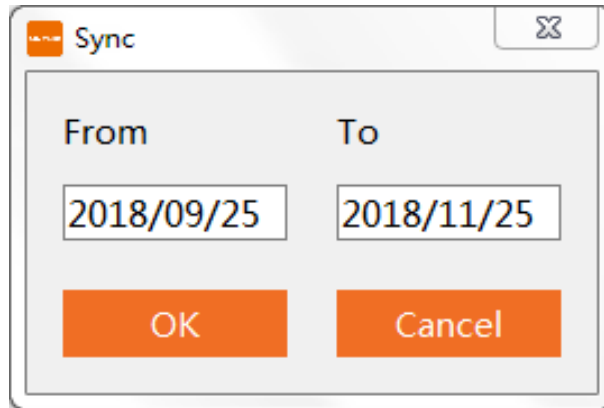
### 7.7 Acquisition, Backup, and Querying of Patient Data

Under normal circumstances, the analyzer's test results can transmit patient data to the management platform via ‘Cloud login’ and ‘Local login’. If the results are not transmitted to the management platform, manual transfer methods can also be attempted to resolve the issue.

1. Click ‘Sync’ to search for all currently connected devices. If the connection is successful, the connected device will appear on the right side of the main menu.

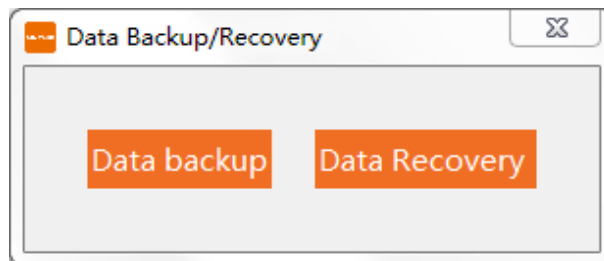


*Note: When you open the management platform software, results from the day are automatically synchronized by default. If data synchronization fails, locate the report in the chemistry analyzer's Results Query and click 'Upload'.*

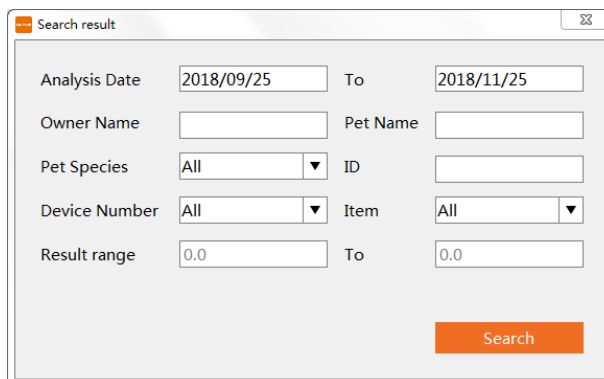


2. Click **'Backup'** to back up or restore your data.

- **'Data Backup'**: Back up data from the current management platform software to the specified location.
- **'Data Recovery'**: Select the '.mdb' file you want to recover.



3. Click **'Search'** to find the test records that meet the specified screening conditions. Enter any one or any combinations of test date range, name, medical record number, gender, age, device ID, project name and result range to screen report sheets.



## 7.8 Report Printing

1. Report preview: Select one patient result, the print preview will be shown.

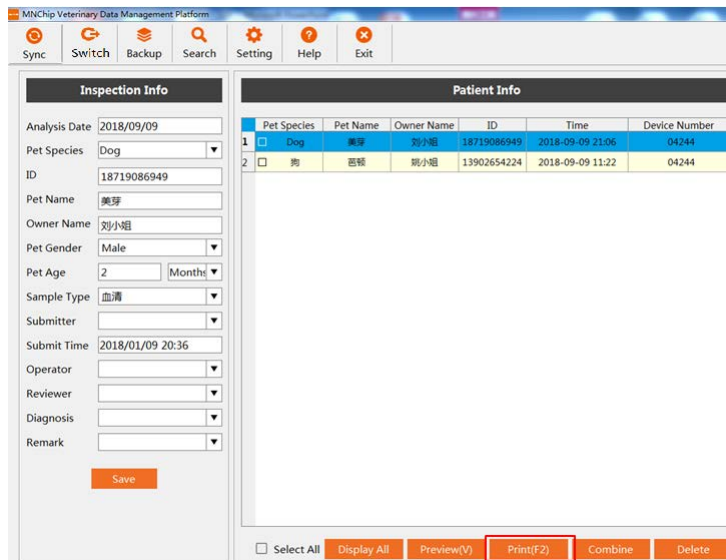
**Biochemical Inspection Report**

Pet Species: Dog ID: 18719086949 Pet Name: 美芽  
 Owner Name: 刘小姐 Pet Gender: 雌性 Pet Age: 2 Months  
 Sample Type: 血清 Diagnosis: Lipemia

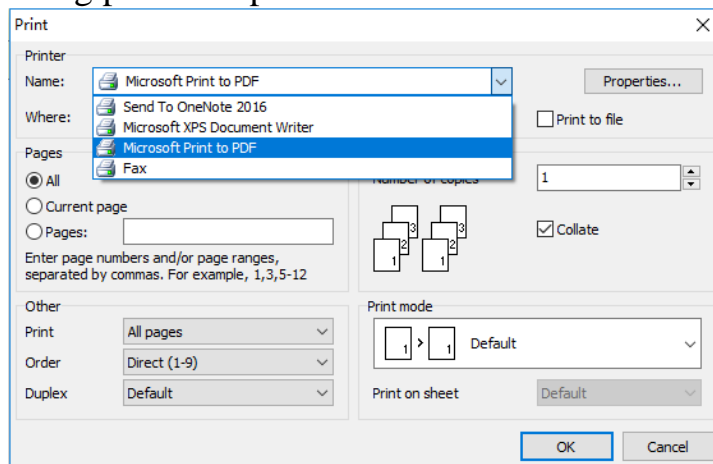
Item Name	Sample Type	Result(Ct)	Ranges	Indicator
FCV	oropharyngeal...	NoCt	> 36 or NoCt	Negative(-)
IC		31	> 36 or NoCt	Positive(+)

SubmitDatetime: 2018-01-09 20:36 Analysis Datetime: 2018-09-09 21:06 PrintDatetime: 2018-12-25 15:36  
 Submitter: Operator: Reviewer:  
 Remarks: ..... The result is only responsible for this sample .....

2. Report print: Reports can be printed using the printer installed on a Windows PC. Select the report to be printed, click **'Print (F2)'**.



Select the corresponding printer to print.



*Note: If the PC is not connected to the designated printer, please install the printer first. You can design the reporter layout using the printer's report setup function.*

## 7.9 Troubleshooting

If the test results cannot be synchronised with MMDMP, try the following solutions:

### 1. Update the Analyzer Software Version:

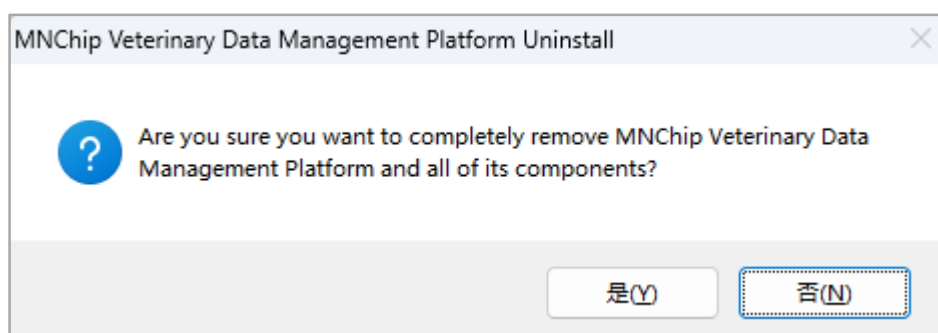
- Turn on the analyzer and go to ‘Setting’ — ‘Network’ to connect to Wi-Fi.
- Once connected to the Internet, return to ‘Setting’ — ‘Chemistry analyzer’ and update the software to the latest version.

### 2. Check Connection Based on Login Type:

- For **local login**, ensure that the data cable is connected properly, then reboot both the Analyzer and management platform software.
- For **cloud login**, verify that both the Analyzer and PC with the software are connected to the Internet.

### 3. Reinstall MMDMP Software:

- Locate the uninstallation software in your installation documentation and run uninst000.exe to uninstall MMDMP by clicking ‘Yes’.
- After uninstalling, reinstall the software as described in **section 7.1**.



## Section 8: FAQ

**1. If "cancel " is selected during the test process, an the PCR reaction tube used in this test be reused as new?**

No, please take a new PCR reagent reaction tube to do the test..

**2. What happens if an expired test kit is used during the test process?**

When scanning the QR code on the package of each reagent, if the reagent is detected to be expired, the analyzer will prompt the message " The reagent has expired, please replace the reagent"

**3. What are the storage conditions and shelf life of the test kit?**

2°C ~30°C protected from light; the shelf life of the test kit is 12 months, as indicated on the label of the packaging.

**4. Do the reagents need to be taken out and restored to room temperature before the test?**

No, using it directly after tearing open the packaging

**5. How should I deal with the error prompt on the analyzer screen?**

When an error occurs, the error code should be recorded first, and then contact MNCHIP after-sales service or local distributors,. they will guide you on how to do the next step based on the type of error reported

**6. What should I do when the sample test results do not match the clinical symptoms?**

When the test values of the sample do not match the clinical symptoms, it is necessary to investigate whether there were any abnormal conditions during the testing process, such as issues with reagents and equipment, or whether the reagents used have expired. If there are no abnormalities found, it is recommended to retest the sample and conduct further examinations with other auxiliary diagnostic methods to ensure the accuracy of clinical diagnosis.

**7. Can the analyzer be connected to an external printer?**

The analyzer can be directly connected to a designated model of printer to print out reports, or it can be connected to a computer via a USB interface (Management software has already been installed.) and then print reports using an external printer.

**8.What should I do if the analyzer is contaminated?**

Please contact our customer service staff and follow their instructions for handling. Do not spray any liquid reagents, such as nucleic acid cleaning agents, into the chamber of the analyzer to avoid damage to its internal components from liquid splashing.

**9. Do operators of the analyzer need professional training, and what are the key points of the training?**

It is necessary to have a brief professional training, which may cover the following key points: the usage procedures of the analyzer, precautions when using the analyzer, sample processing and sampling,, common malfunctions and solutions, and etc.

**10. How is the MNCHIP's after-sales service?**

From the date of installation, the warranty period of the analyzer is two years, and MNCHIP will provide free maintenance of the products (except accessories and consumables) during the warranty period. For the products beyond the warranty period, they will be charged according to the maintenance service standard. After-sales service is handled by Tianjin MNCHIP Tchnologies Co.,Ltd and authorized distributors.