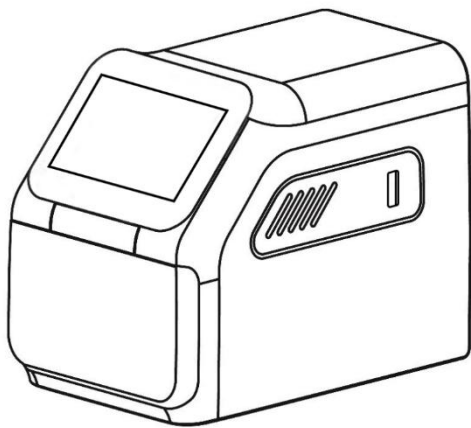


MNCHIP

Pointcare V3

Automatic Chemistry Analyzer

Operator's Manual



Please read the Operator's Manual carefully before use

For Veterinary Use Only

CE



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Thank you for purchasing the Pointcare V3 Chemistry Analyzer. This manual is intended for operators who have completed the training course offered by MNCHIP, or MNCHIP’s authorized dealers. Please read and understand the Operator’s Manual carefully before operating the system.

Warranty

MNCHIP warrants that this chemistry analyzer will be free from defects under normal use and service for a period of two (2) years from the date of installation. If the analyzer proves to be defective within the foregoing warranty period, the customer may call +86.131.6318.8628 (also service WhatsApp) or write an email to service@mnchip.com and speak with MNCHIP Technical Support. MNCHIP will repair, replace, or adjust the defective product, provided that MNCHIP investigation and inspection disclose that (i) such defect developed under normal and proper use and (ii) the analyzer is covered under this warranty. Repair, replacement, or adjustment of defective products shall be MNCHIP's sole obligation and the customer's sole remedy hereunder. MNCHIP reserves the right to (i) use reconditioned, refurbished, and/or serviceable used parts (tested to MNCHIP's quality assurance standards) for warranty repairs and (ii) make any internal or external design and/or feature changes on or to its products without any liability to incorporate such changes on or to the products. Repair parts will be free from defects under normal use and service for a period of ninety (90) days from the date of installation. Excluded from this warranty and not warranted by MNCHIP in any fashion, either express, implied, or by statute, are: a. the analyzer which has been disassembled, repaired, tampered with, altered, changed, or modified by persons other than MNCHIP's own authorized service personnel unless repair by others is made with the written consent of MNCHIP; b. defects or damage to the analyzer resulting from wear, tear, misuse, negligence, impact, improper storage, nonperformance of scheduled operator and maintenance items, or use of non-approved accessories, consumables, or supplies; and c. supplies, reagents, and consumables, which may be covered under a separate warranty. This warranty is exclusively for the benefit of the original customer and cannot be transferred or assigned.

Safety Precautions

To use the analyzer safely and effectively, please observe the following precautions. If the system is used in a manner not specified by the manufacturer, the protection provided by the analyzer may be impaired.

Prevention of System Failures and Flammability

The instrument must be installed correctly according to the installation environment and the installation conditions shown in this manual.

Preventing Electric Shocks

Never remove the covers secured by screws, such as the rear cover and side covers, unless being guided by the authorised personnel of MNCHIP. If liquid spills or leaks occur inside the system, contact MNCHIP Technical Support. Careless operation with liquid present may result in an electric shock.

Preventing Infection

If samples used with the system are mishandled, there is a risk of being infected. Do not touch the samples with bare hands. Be sure to wear gloves to protect yourself from infection. Should any samples come into contact with your skin, thoroughly wash the area that came into contact with the sample and consult a physician. Immediately wipe off any contaminants from the system. For details, please check OSHA guidelines in your country. For your reference may also see OSHA 29 CFR Part 1910 ('Occupational Safety and Health Standards'), Standard Number 1910.1030 ('Toxic and Hazardous Substances: Blood borne Pathogens'), which can be found on the Internet by going to <http://www.osha.gov> (United States Department of Labor) and searching for '1910.1030'.

Handling Reagents

Reagent beads may contain acids or corrosive substances. The operator does not come into contact with the reagent beads when following the recommended procedures. In the event that the beads are handled (for example, cleaning up after dropping and cracking a reagent disc), avoid ingestion, skin contact, or inhalation of the reagent beads.

Treating Waste

Used reagent discs contain animal blood. Follow good laboratory safety practices when handling and disposing of used discs. For proper waste disposal methods, refer to your local government guidelines. For proper handling of substances with a biosafety level 2, refer to your Centres for Disease Control/National Institutes of Health manual. Also, the following NCCLS document provides guidance on the safe handling and disposal of chemical, infectious, radioactive, and physical waste generated in the clinical laboratory. Refer to NCCLS document GP5-A Vol. 13 No. 22 'Clinical Laboratory Waste Management; Approved Guideline.' This can be found on the Internet at <http://www.clsi.org>.

Section 1 General Information

1.1 Intended Use

Pointcare V3 Chemistry Analyzer provides quantitative in-vitro determination of clinical chemistry analytes in lithium-heparinized whole blood, heparinized plasma, or serum. The entire analysis requires 100 µL of sample and is capable of providing results in 13 minutes.

1.2 Introduction

Pointcare V3 System is based on microfluidics technologies, It consists of a portable analyzer and single-use disposable reagent discs. The analyzer contains a variable-speed motor to spin the disc, a photometer to measure analyte concentrations, a microprocessor for system control and data acquisition calculation and a capacitive touchscreen for communicating with the analyser. Each reagent disc is a self-contained, clear, plastic disc with a plastic film on top, 7.8cm in diameter and 0.68cm thick and contains freeze-dried reagent beads in cuvettes around its edge. All of the blood separation and sample diluent mixing are carried out within the disk itself by the centrifugal force generated by the rotation of the motor. The device uses an external scanner or built-in scan module to read the disc information.

To perform the analysis, the operator collects a blood sample (lithium-heparinised whole blood, plasma or serum), pipettes the sample into the reagent disc, places the disc into the analyser drawer at the front of the analyser and enters patient information. After the analysis is complete, there is an option to print the report. Results are also stored in the analyser's memory and can be transmitted to an external printer, computer, memory stick or laboratory information systems/electronic medical record systems (LIS/EMR).

Note: This manual includes analyser and computer screenshots. These screenshots are for reference only. All screens represent typical use and installation, although it may be different from the screen on your system.

1.3 Technical Support

















MNCHIP Technical Support team can answer questions regarding the operation of the chemistry analyzer. Please contact them:

E-Mail: service@mnchip.com

Service phone: +86 131 6318 8628 (also service WhatsApp)

1.4 Symbols Used in Labelling

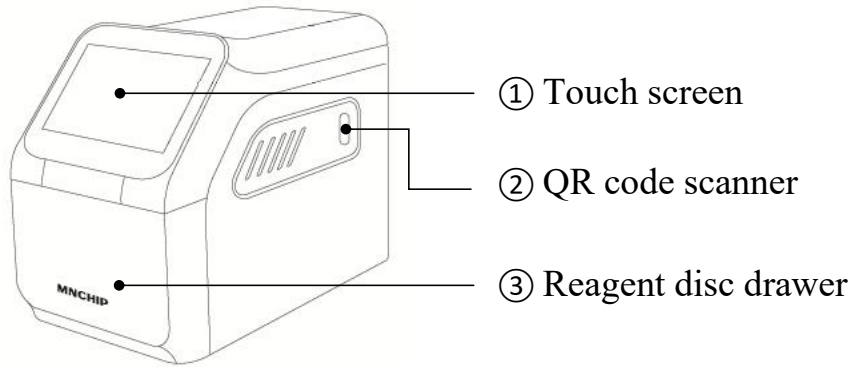
The following symbols are found on the analyzer or labelling:

Item	Description
	Biological risks
	USB connection
	CE MARK
	Serial number
	Direct current
	Date of manufacture
	Manufacturer
	Authorized representative in the European Community
	In vitro diagnostic medical device
	Caution. Refer to any accompanying documents
	Electrical and electronic equipment, Do not discard at will, please recycle
	Fragile, handle with care
	Keep dry
	This is the correct upright position of the distribution packages for transport and/or storage
	Distribution packages shall not be rolled or turned over
	Up to 6 identical transport packages can be stacked on the bottom package

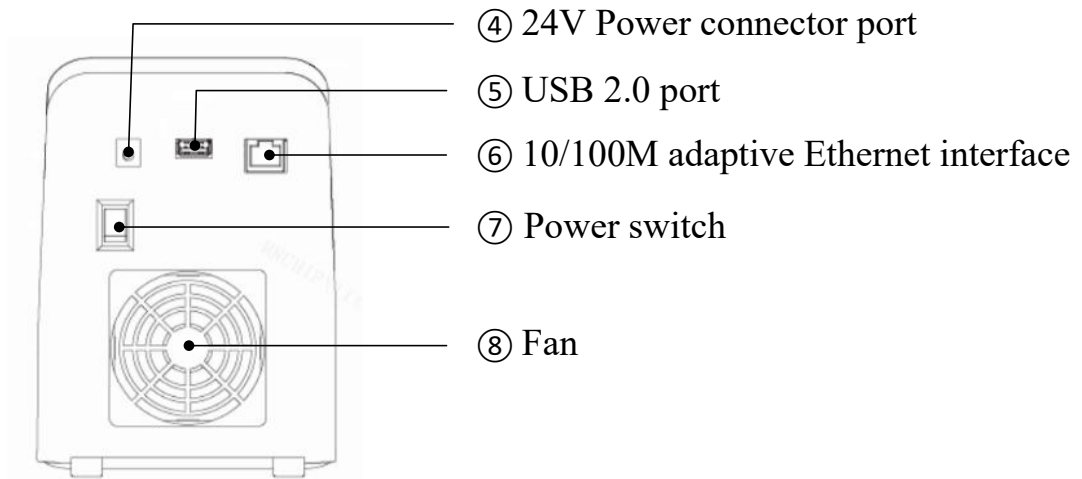
Section 2 Installation

2.1 Unpacking

1. Take the Pointcare V3 Chemistry Analyzer out of the shipping carton. Place the analyzer on a level surface that is free of hair, dust, and other contaminants. Do not place the analyser in direct sunlight or near any other heat source.
2. The following figures show the analyzer’s functional description of each part.



The front of the analyser



The rear of the analyser

NO.	Item	Function
1	Touch screen	For human-computer interaction
2	QR code scanner	Scan the QR code of the reagent
3	Reagent disc drawer	Test area, place reagent disc

4	24V Power connector port	Power connector port
5	USB 2.0 port	Data transfer, computer connection, printer connection
6	10/100M adaptive Ethernet interface	Access the network by connecting network cables
7	Power switch	Turn on/Turn off the device
8	Fan	Ventilation and heat dissipation during operation

3. Check the components received with the Pointcare V3 Chemistry Analyzer against the Packing List to make sure everything required to set up the analyzer is included.
4. Please complete the warranty card after the installation and send scanned warranty card via email to service@mnchip.com within 10 days to start the warranty period. Customers are placed on the customer mailing list to receive any information pertaining to the analyzer and ancillary products, such as software upgrades.

2.2 Analyzer and Environmental Specifications

Analyzer Dimensions:	210(L)×125(W)×175(H)mm
Weight:	Ca. 3kg
Mode of Operation:	Continuous
Ambient Operating Temperature:	10~30°C (50–86 °F), indoor use
Atmospheric Pressure:	86.0 kPa~106.0 kPa/2000 m (6562 ft)
Humidity:	40%~85%
Power Requirements:	120 VA
Main Supply Voltage:	100-240 volts AC, 50-60 Hz
Reaction Temperature:	37°C (98.6 °F)

2.3 Setup

1. Set up the analyzer on a surface as follows:
 - On a level surface with nothing blocking the reagent disc drawer.
 - Free of vibration and sudden jolts.
 - Free of hair, dust and other contaminants.
 - Located in an ambient operating temperature of 10–30 °C (50–86 °F).
 - Away from direct sunlight and all other potential heat sources.

- At least 30 cm (12 inches) away from any walls to provide adequate ventilation and access to the power connection and USB ports.
2. Plug the power cable into the analyser. Then, plug the detachable power supply cord into the power adapter and into a grounded electrical outlet.

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.** MNCHIP also recommends using a surge protector of the same type used for computers.

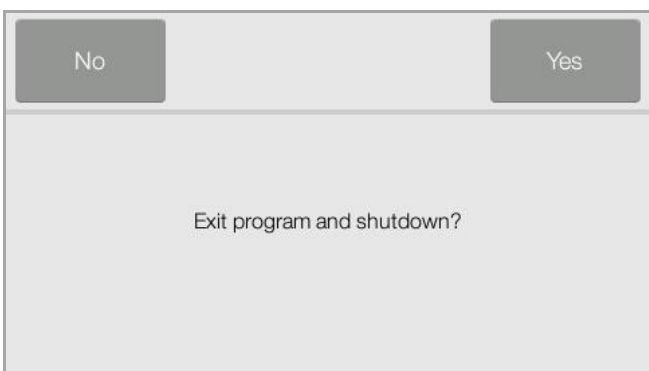



3. Press the Power button to turn on the analyzer. During the self-test and warming period, the display will show the image on the left..

Note: The analyzer may require additional time for the heaters to warm the analyzer to operating temperature under low ambient temperature.

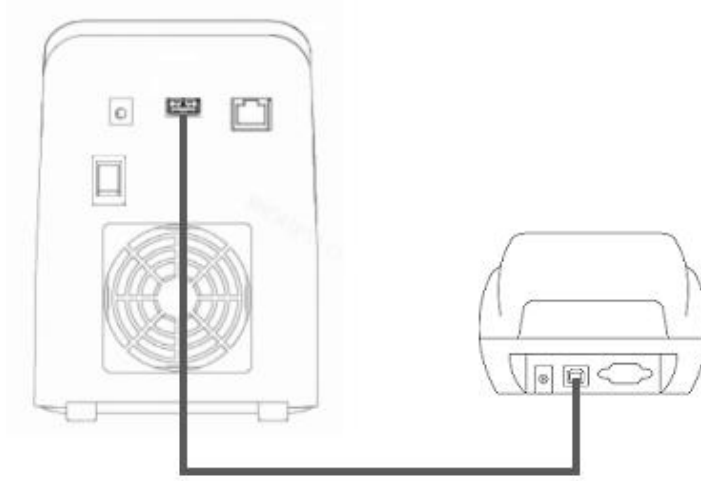


4. After passing the self-testing and reaching operating temperature, the analyser is ready to run the first reagent disc and will display the image on the left.
5. Check the analyzer date and time to ensure they are correct. Refer to **Section 5.2**, 'Changing Date and Time' for directions.



6. Shutdown the analyzer by pressing '  ' on the home page then turn off the power button.

7. The analyzer can be connected to an external printer to print patient and control results. As shown in the following figure.



8. Reference ranges are preset in the analyser. The range values can be changed using the Customising Reference Range feature described in **Section 5.5** . .

Section 3 Basic Operations

3.1 System Description

1. The Pointcare chemistry system consists of a portable analyzer and disposable single-use reagent discs. Each reagent disc contains all the reagents needed to perform a panel of tests on a single sample.
2. The Pointcare analyzer uses centrifugal and capillary forces to process heparinized whole blood samples and distribute diluted plasma to the reaction chambers (cuvettes) in the reagent disc. Serum and heparinized plasma samples are processed in a similar manner. The analyzer optically measures the chemical reactions and calculates analyte concentrations from these measurements and from encoded calibration data contained on the QR code on the reagent disc pouch.
3. Results are stored in memory, and can be printed using the external thermal printer or downloaded to an external personal computer for MNCHIP Medical Data Management Platform (MMDMP). The touchscreen display provides easy communication with the analyzer. The touchscreen shows procedural instructions, indicates the status of the analyzer, and presents any error messages. For error messages details, see **Section 8**.

3.2 Sample Requirements

3.2.1 Sample Requirements

1. The Pointcare V3 Chemistry Analyzer only accepts lithium-heparinized whole blood, plasma or serum samples.

Note: When collecting the sample in lithium heparin collection tubes, fill the tube at least half-way so the anticoagulant does not become too concentrated in the sample.

2. **Only use lithium-heparinized plasma or serum for performing lactate dehydrogenase (LDH) tests.** For the sample type applicable to each disk, please refer to the corresponding kit IFU.
3. A sample size of 100 µl is required.

4. Whole blood must be analyzed within 60 minutes of collection, or separated into plasma or serum.

Note: If not analysed immediately, plasma or serum can be stored at room temperature for no longer than 5 hours after centrifugation. If storage for more than 5 hours is required, refrigerate the sample in a capped tube at 2 - 8 °C (36 - 46 °F) for no longer than 48 hours or store it at -10°C for up to 5 weeks in a freezer with no self-defrost cycle. Under these conditions, there will be no clinically important changes in most analyte concentrations.

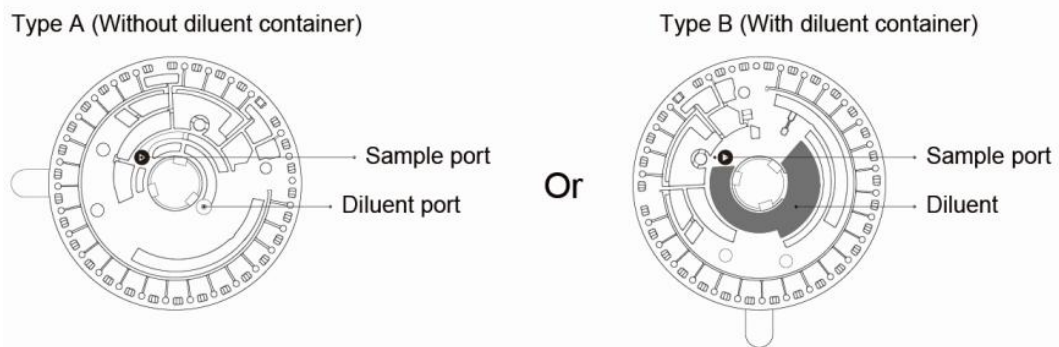
Caution: To prevent hemolysis, do not refrigerate or shake whole blood.

3.3 Preparing the Reagent Disc

3.3.1 Disc Structure and Function

A total of 29 cuvettes are located around the periphery and some of cuvettes contain test-specific lyophilized reagent beads needed to perform one or more tests on a single sample.

- A specially designed cuvette detects whether sample volume was sufficient.
- A specially designed cuvette detects whether diluent volume was sufficient.
- A cuvette verifies that sufficient diluted sample was delivered to the reaction cuvettes an empty cuvette captures excess fluids
- 21 cuvettes contain test-specific lyophilized reagent beads
- The sample port, marked by red to a molded circle on the disc's upper surface, provides access to the sample chamber.
- Type A disc: The diluent port, marked by white to a molded circle on the disc's upper surface, provides access to the diluent chamber.
- Type B disc: A sample diluent is sealed in a container inside the disc. At the beginning of the reaction cycle, open this container and releases the diluent.
- The structure of reagent disc as shown:



The analyzer separates a lithium-heparinized whole blood sample by centrifugation inside the disc. Plasma and serum samples are unaffected. Precisely measured quantities of sample and diluent are delivered to the mixing chamber. Centrifugal and capillary forces then deliver the diluted sample to the cuvettes, where it dissolves the reagent beads and initiates the chemical reactions. Reaction products in the cuvettes are then measured photometrically.

3.3.2 Preparing the Reagent Disc

Open the disc pouch at the notch on the top right edge of the package. Take the reagent disc out and put on the table in a flat position.

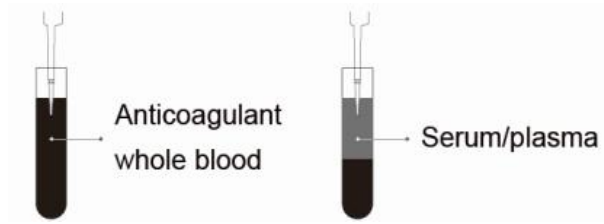
A. For Type A disc (Without diluent container):

- a. Dispense sample: Use the 100 μL volume pipette. Place a clean pipette tip on the end of the pipette.

Holding the pipette with four fingers, press the top button of the pipette with your thumb to the stop position and hold.

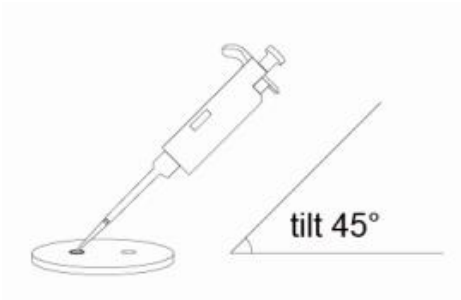
Immerse the pipette tip below the sample level and slowly release the button to draw up the sample. Remove the pipette from the sample. Make sure there are no air bubbles in the tip.

Note: Whole blood samples obtained by venipuncture must be homogeneous before transferring a sample to the reagent disc. Gently invert the collection tube several times just prior to sample transfer. Do not shake the collection tube; shaking may cause hemolysis.



- b. Adding sample: Ensure the pipette tip is vertically inserted into the sample well in the disc, then tilt 45°. Press the top button slowly until all the sample is dispensed into the disc.

After adding the sample, discard the tip into a biohazard container.



Caution: Ensure the whole blood sample is gently inverted before pipetting. Do not violently shake to avoid haemolysis.

- c. Adding diluent: Use the 430µL volume pipette to dispense approximately 430µL of sterile water for injection (SWI) into the diluent chamber via the diluent port with the same procedure of fill the sample chamber.

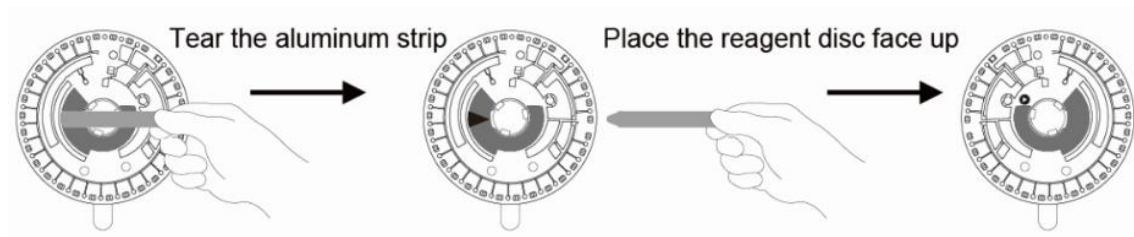


Caution: Keep straight when adding diluent. Do not use saline, mineral water or tap water.

B. For Type B disc (With diluent container):

- a. Opening diluent container: Face the side with aluminum strip on the reagent disc. Tear the aluminum strip off the reagent disc in the extended direction of the aluminum strip to open the diluent container, then the diluent is released into the diluent chamber of the reagent disc.

Then place the reagent face up on the flat surface.

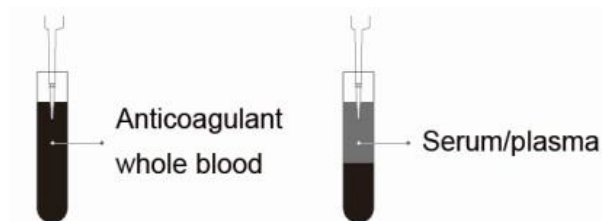


- b. Dispense sample: Use the 100 μ L volume pipette. Place a clean pipette tip on the end of the pipette.

Holding the pipette with four fingers, press the top button of the pipette with your thumb to the stop position and hold.

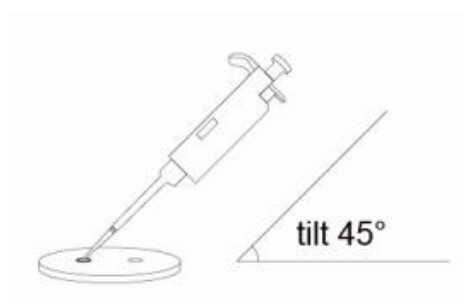
Immerse the pipette tip below the sample level and slowly release the button to draw up the sample. Remove the pipette from the sample. Make sure there are no air bubbles in the tip.

Note: Whole blood samples obtained by venipuncture must be homogeneous before transferring a sample to the reagent disc. Gently invert the collection tube several times just prior to sample transfer. Do not shake the collection tube; shaking may cause hemolysis.



- c. Adding sample: Ensure the pipette tip is vertically inserted into the sample well in the disc, then tilt 45°. Press the top button slowly until all the sample is dispensed into the disc.

After adding the sample, discard the tip into a biohazard container.



Caution: *Ensure the whole blood sample is gently inverted before pipetting. Do not violently shake to avoid haemolysis.*

Note: Disc Storage and Handling

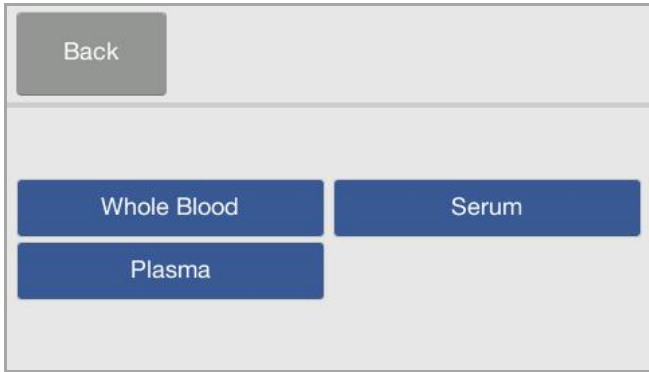
- *Store each reagent disc as described on its label. This keeps the disc’s reagents stable until the expiration date printed on the disc’s foil pouch. The analyser will automatically reject any expired disc.*
- *Discs can be used directly from the refrigerator (stored at 2 - 8 °C (36 - 46 °F)) without warming.*
- *Do not expose discs - in or out of their foil pouches - to direct sunlight or to temperatures above 32 °C (90 °F).*
- *Inspect the unopened foil pouch for tears and punctures. A torn or damaged pouch can allow moisture to reach the disc and reduce reagent performance.*
- *Once the pouch is opened, discs must be used within 20 minutes. Do not place the disc back in the refrigerator for later use.*
- *Keep discs clean. Handle them only by their edges to avoid smudges on the optical surfaces. Use a lint-free tissue to remove any spilled blood from disc surfaces.*
- *Wear powder-free gloves while handling reagent discs or operating the analyser. Powder can disrupt the analyser’s optical components.*
- *Hold reagent discs flat after introducing the sample or control to avoid spillage.*
- *Discs are fragile - always handle with care. Inspect every reagent disc for damage before use. Never use a damaged disc.*

3.4 Sample Analysis

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



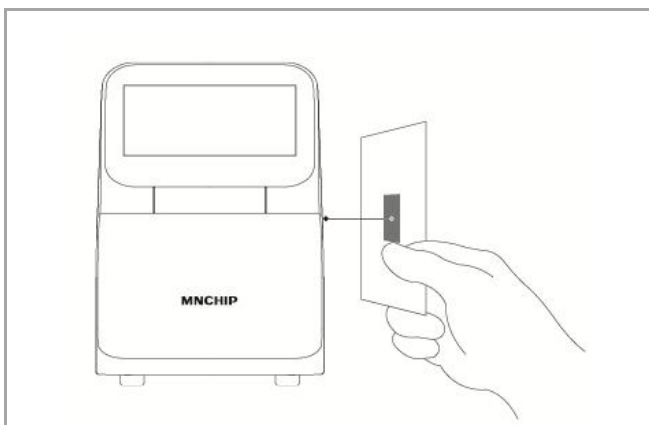
1. After passing the self-testing, the analyser will display the main screen (operating interface) as the image on the left shows.
2. Press ‘**Analyse**’ to start the analysis.



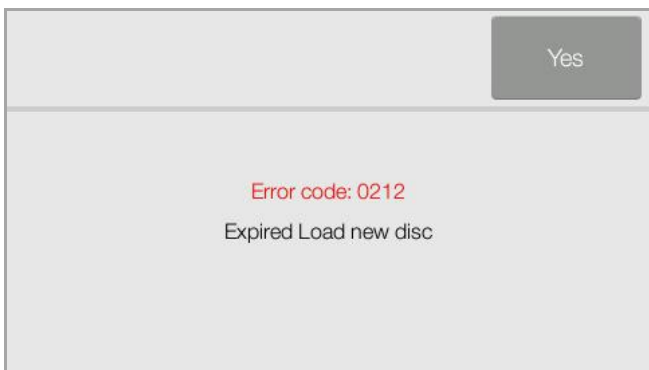
3. Select **'Whole Blood'**, **'Serum'** or **'Plasma'** depending on the sample type, the screen for scanning the QR code is displayed.

4. Scan the QR code on the label of the foil pouch. The QR code contains the disc information e.g. disc identification code, lot number, expiration date and calibration data etc.

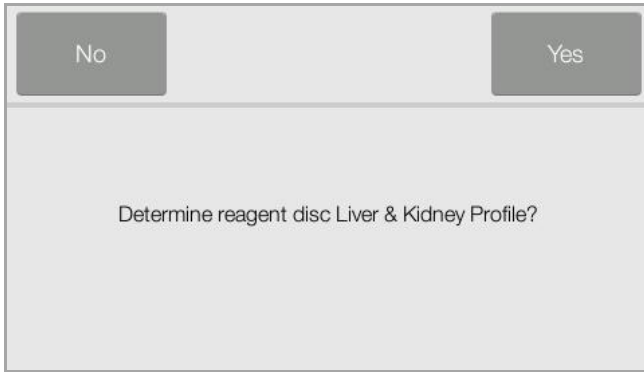
Note: Please check before scanning that the QR code label is flat and the light in the surrounding environment is sufficient.



- a. Place the QR code in front of the QR scanner on the right side of the analyser. Hold still to scan the QR code.



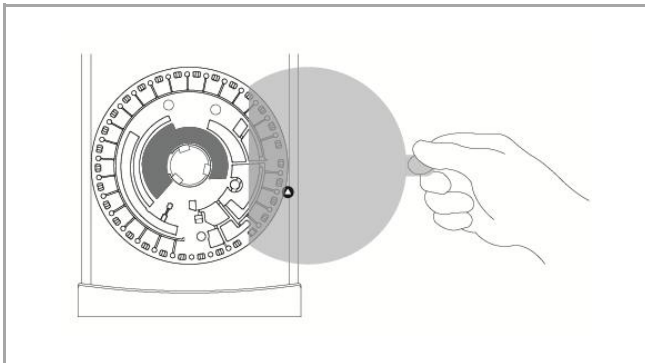
- b. Once the scan is complete, a prompt with the disc type name will display on the screen. (If the disc is found to be expired, a prompt appears. Rescan a new disc.)



- c. Press 'Yes' to confirm it is the right disc type to run the patient sample and the disc drawer will open. Load the disc.

OR

- d. Press 'No' to cancel the disc information and scan a new disc.



5. Dispense the patient sample and the diluent into the disc according to the procedure in **Section 3.3**. Press 'Yes' to open the drawer and place the disc in the recessed area of the drawer. Remove the blue protective film.



6. Press 'Yes' to confirm the blue film has been removed and the disc drawer will close.

Note: *If it is a new version disc, there is no blue protection film, run the test directly after adding the sample into the black route port.*



7. Press the 'PageUp / PageDown' to select the patient's species.

8. Once the **patient's species** is selected, the patient information input screen is displayed. Use the keyboard to input the **patient's name, owner's name and patient's ID**, press 'Next'.

9. Input the **patient's age**, select the **patient's gender**, press 'Next'.

*Note: Required items are marked with a *. When all items needed have been inputted, click 'Next'.*

10. After completing the patient's information, the analyser will display a progress bar and analysis countdown timer.

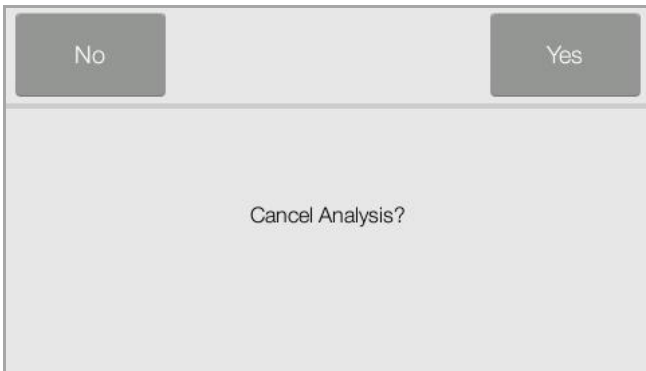
Species:Dog	Patient:			
Owner:	ID:001			
Gender:Male	Age:			
Sample type:Whole Blood				
LOT: 99665-24-0136-0223-55-171252-2752				
Item Name	Result	Indicator	Ranges	Unit
ALB	41.0		25-44	g/L
TP	56.3		54-82	g/L
GLO	15.3	↓	23-52	g/L

11. After the analysis is complete, the analyser stores the results in the memory and displays the results on the screen as shown. By default, the analyzer automatically prints the results of the analysis by the analyzer's external printer. If the results do not print automatically, they can be recalled from database and printed — see 'Recalling results' in **Section 3.7**.

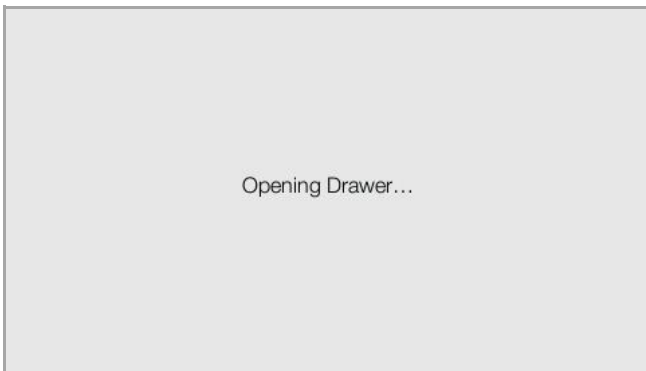


12. Press **‘Open’** to open the drawer and remove the disc from the drawer. Then, press **‘Close’** to close the drawer and return to the main screen. The analyser is now ready to perform another test.

3.5 Canceling Analysis

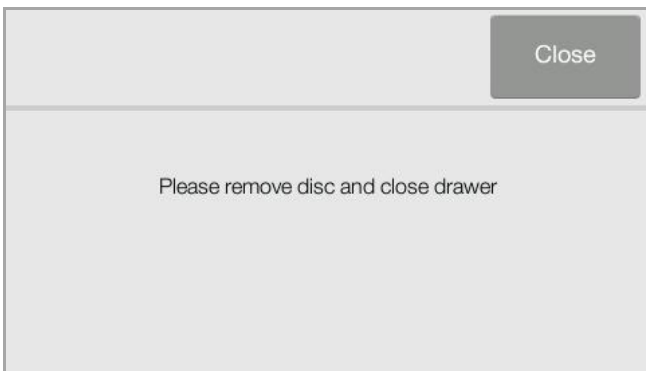


1. Occasionally the analysis has to be cancelled. Press **‘Cancel’** on the screen. The display will ask for confirmation to cancel the analysis.



2. After pressing **‘Yes’** to confirm, the analysis will be cancelled and the drawer will open automatically.

Note: Sometimes the analyser may need several minutes to open the drawer because internal procedures need to be completed.



3. Remove the disc from the drawer, and press **‘Close’** to close the drawer. The analyzer is now ready to perform another analysis.

3.6 Report

A typical report printout is shown on the right. The heading of a report printout includes information such as Sample Patient Name, Owner Name, ID Number, Gender, Age, Sample Type and Lot Number. The test results section is printed in five columns: Analyte Name, Analyte Result, Indicator, Reference Range and Specified Units. The end of the report printout includes information such as the sample indices, test date and time, and blank areas for the operator and reviewer to sign.

Species: Dog				
Pet: peipei				
Owner: Ms. Zhang				
ID: 400205				
Gender: Male				
Age: 1year5month				
Sample type: Whole Blood				
LOT: 42546-20-55-171220-1755				
Item Name	Result	Indicator	Ranges	Unit
ALB	5.2	↑	2.5-4.4	g/dL
TP	6.8		5.4-8.2	g/dL
GLO	1.6	↓	2.3-5.2	g/dL
P	29.16	↑	2.9-6.6	ng/dL
CHOL	600	↑	124-271	mg/dL
ALT	>1500	↑	10-110	U/L
TBIL	0.12		0-0.6	mg/dL
ALP	30		20-150	U/L
CRE	5.82	↑	0.3-1.3	mg/dL
CK	>5000	↑	20-200	U/L
Lipemia				
Report DateTime: 2017-10-26 03:34				
Operator:				
Reviewer:				
The results relate only to the sample tested				

Interpretation of Results

1. Results outside the reference range are indicated in the results by a ‘less than’ symbol ↓ or a ‘greater than’ symbol ↑ printed next to the analyte concentration.
2. Results outside the dynamic range are indicated in the results by a ‘less than or equal’ symbol ≤ printed next to the lowest value of the dynamic range, or a ‘greater than or equal’ symbol ≥ printed next to the highest value of the dynamic range.
3. The symbols ‘ – ’ are printed in place of numbers when a result is abnormal. A result may be abnormal due to reagent deterioration, interference of endogenous substances (such as haemolysis, icterus and lipaemia) in the sample, interference of exogenous and therapeutic substances in the sample or a concentration outside the analyser’s reportable range. When a chemistry result is replaced with --, the reason will be shown on the bottom of the report. Repeat with a new disc. If the result still doesn’t report, please contact MNCHIP Technical Support.
4. Samples are checked for physical interference from haemolysis, lipaemia and

icterus. When some of the indices exceed the pre-established limit, the corresponding index (HEM, LIP, or ICT) is printed on the bottom of each result card to inform the operator about the interference..

Note: If the sample is identified as haemolysed, collect a new sample and run another reagent disc. If the new sample is still haemolysed, use an alternative testing method or send the sample to a reference laboratory.

Samples with haematocrit in excess of 60% packed red cell volume may appear on the result card as HEM. These samples may be spun down to obtain plasma, then re-run in a new reagent disc.

High lipemia may be due to diet. Ensure the patient has fasted for at least 12 hours before collecting another sample. For grossly lipemia samples from fasting patients or for icteric samples, use an alternative testing method or send the sample to a reference laboratory.


5. During an analysis, the analyzer checks the volumes of sample and diluent. If insufficient sample or diluent has been applied to the disc, an error report with error code 0208 or 0209 is printed. Repeat one time with a new disc loaded sufficient sample and diluent according to the procedure in **Section 3.3**.
6. In very rare instances, sample dispensed into the sample chamber of reagent disc may not be delivered into reaction cuvettes, or mixes improperly with the diluent, an error report with error code 0210 or 0211 is printed. The sample may be re-run using a new reagent disc. Please contact MNCHIP customer service or local distributor for reviewing the error report.

3.7 Recalling Results

The results obtained by the analyser are stored in the analyser memory and can be recalled and printed again as needed. If the analyser is connected to an external computer or a USB storage device, the results can be transmitted to them.

The Recall function is available from the analyzer's Main Screen. The operator can search results by **ID** or view patient results by date.



1. On the main screen, press '  ', The display will show the image on left. Then select '**Patients**'.

Back Search

ID:

fromDate: 10/07/2019 edit 

toDate: 10/07/2019 edit 

2. Enter the ID or the time range to search reports.

Back PageUp PageDown Upload

ID	Date
123321	08/08/2019
	08/08/2019
4012345987652	08/08/2019
3333333333	08/08/2019

3. The analyzer then displays a list of reports sorted by search conditions. Press **'Page Down'** / **'Page Up'** to scroll through the list. Select **'Upload'** to upload the reports to MNCHIP Data Management Platform.

Yes

Upload complete!

Back PageUp PageDown Print

Species:Dog Patient:
 Owner: ID:001
 Gender:Male Age:0month
 Sample type:Whole Blood
 LOT: 99665-24-55-171252-2752

Item Name	Result	Indicator	Ranges	Unit
<input checked="" type="checkbox"/> ALB	41.0		25-44	g/L
<input checked="" type="checkbox"/> TP	56.3		54-82	g/L
<input checked="" type="checkbox"/> GLO	15.3	↓	23-52	g/L

4. Select a report in the list to show detailed results.

The Recall function is available from the MNCHIP Data Management Platform. The operator can search results by Species, Gender, Age, ID or view patient results by date. Please refer to **Section 8**.

Section 4 Calibration and Quality Control

4.1 Calibration

Pointcare V3 Chemistry Analyzer is calibrated by the manufacturer before shipment. The analyzer performs hardware self-calibration whenever the power is turned on. Each reagent bead used in the reagent disc is calibrated to a reference method and/or reference material by the manufacturer before shipment. The QR code printed on the foil pouch of the reagent disc contains the disc-specific calibration data and provides the analyzer information to measure analyte concentrations.

4.2 Quality Control

Performance of the Analyzer or the reagent disc can be verified by running controls. A control is a biological sample or solution that is analyzed for purposes of quality control. The composition of the control must be such that the solution closely matches that of a biological specimen for characteristics of importance to the analyzer. Control materials need to be stable and available in sufficient volumes in multiple portions and over an extended period. Many control products are available commercially. Assayed controls are provided with expected values of the analytes for guidance.

For a list of approved quality control materials with acceptance ranges, please contact MNCHIP Technical Support. Other serum or plasma-based controls may not be compatible. Quality control materials should be stored as described in the control package insert.

For the quality control test, we strongly recommend that you follow the requirements of the local health regulatory department. In addition to this, we also recommend as follows:

- At least every 30 days
- Whenever laboratory conditions have changed significantly
- When training or retraining of personnel is indicated
- When test results do not match patient symptoms or clinical findings
- With each new lot of reagent

Samples and controls are analyzed identically by the analyzer. However, using the **Control** option stores control results separately from patient results in the analyzer database. Control results can be printed on a report immediately after control analysis,

or whenever the control results are recalled.

Handle the control as described in the control package insert. Please contact MNCHIP Technical support for assistance in interpreting control results. The analyzer automatically stores control results in a memory separate from the patient results memory. The Recall function can be used to search for specific control results without searching through all patient results stored in memory.

Caution: Discs are fragile — always handle with care. Do not use a disk that has been dropped. Inspect every reagent disc for damage before use. Never use a damaged disc.

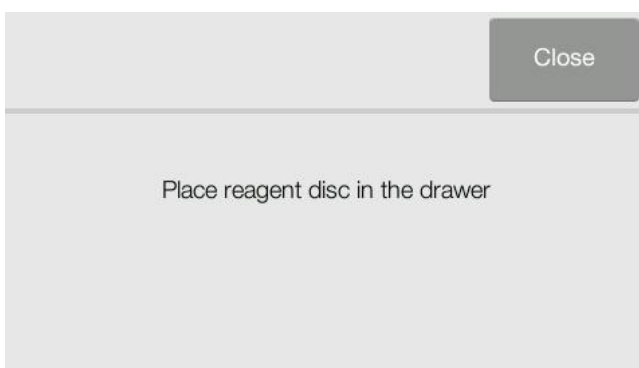
4.3 Control Analysis



1. On the main screen, press ‘QC’. Controls can be run whenever the analyzer displays the **Main Screen**.



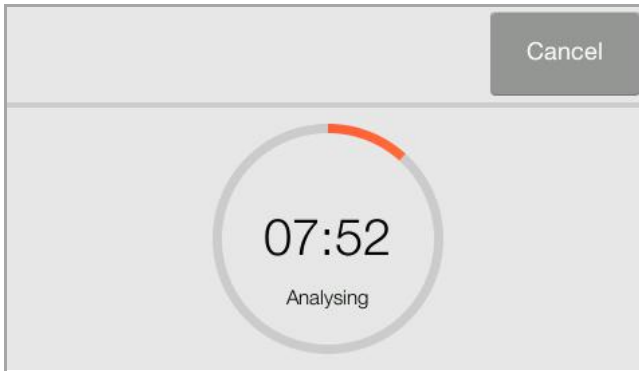
2. Scan the QR code on the foil pouch of the reagent disc as described in **Section 3.4 Sample Analysis**.



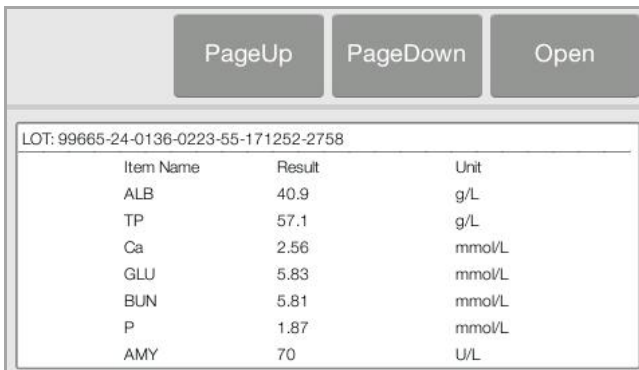
3. Dispense the control material in the disc as described in **Section 3.3. Prepare the Reagent Disc**. Place it in the drawer of the analyzer to start analysis.



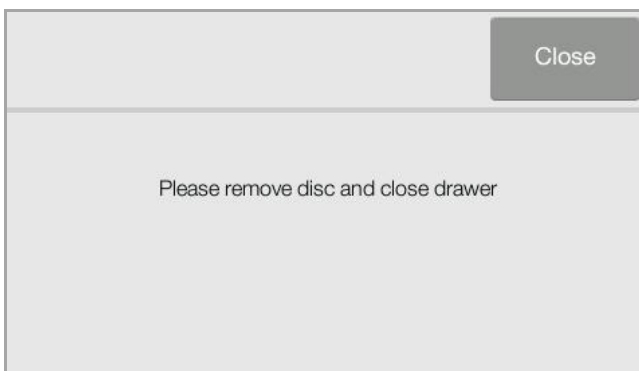
4. Input the control Lot number. Press ‘**Next**’ to show the progress bar with a countdown timer.



5. Countdown timer..



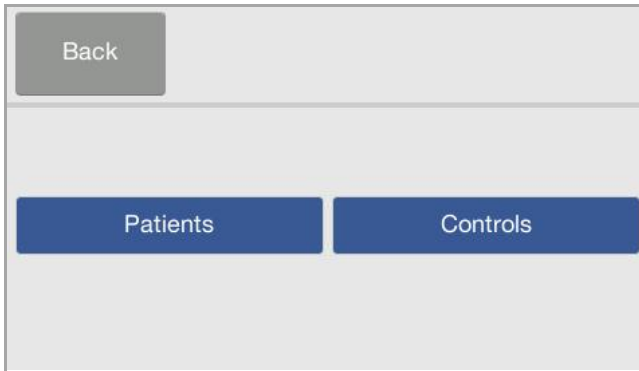
6. After the analysis is complete, the analyzer stores the results in database. Compare control result to range printed on the control data sheet.




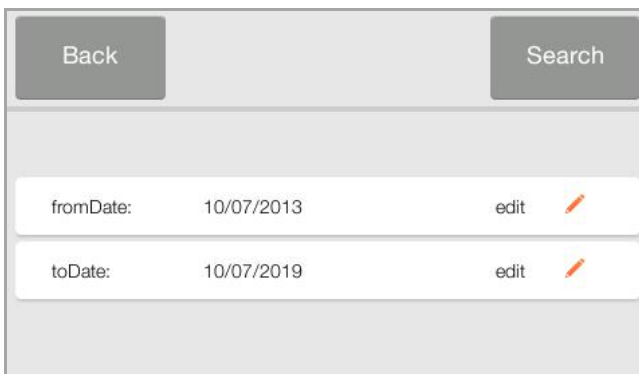
7. Press **Open** to open the drawer, and remove the disc from the drawer. Then press **Close** to close the drawer and return the analyzer to standby mode.

Note: If control results are out of range, repeat. If still out of range, please contact the Technical Support.

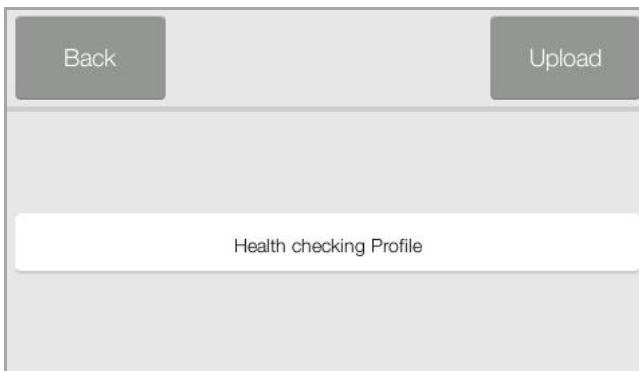
Recalling Control Results



1. In the main screen, press , then select **Controls**.



2. Enter the date range to search control reports.



3. Select reagent disc type.



4. Select control Lot number.

Back	PageUp	PageDown	Print
LOT: 99665-24-0136-0223-55-171252-2758			
Item Name	Result	Unit	
ALB	40.9	g/L	
TP	57.1	g/L	
Ca	2.56	mmol/L	
GLU	5.83	mmol/L	
BUN	5.81	mmol/L	
P	1.87	mmol/L	
AMY	70	U/L	

5. The detailed results of the specific control report will show. Press 'Print'.

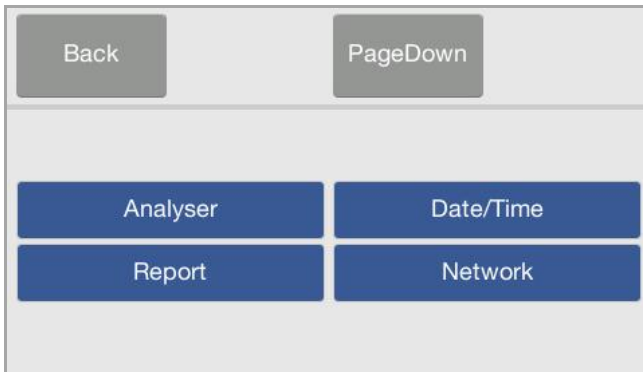
Section 5 Configuring the Analyzer

This section describes how to configure the analyzer.

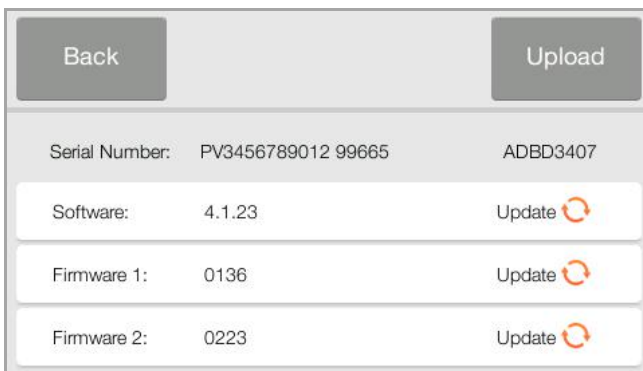
5.1 Analyzer Information



1. On the Main Screen, press ‘’.



2. Then press ‘**Analyzer**’.

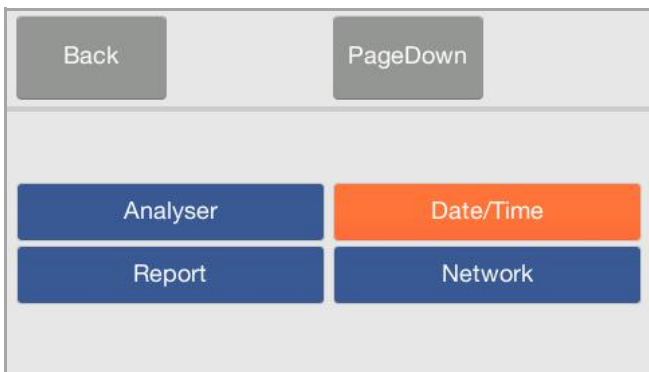


3. The display will show the analyzer information, such as serial number, the version of the installed software and upload log.

5.2 Changing Date and Time



1. On the Main Screen, press ‘’.



2. Then press ‘**Date/Time**’.



3. The display will show the Set **Date/Time** screen. Automatically synchronize network time when the network is connected.



4. Press ‘**Up/Down**’ to adjust the year, month, day, hour, minutes and second.




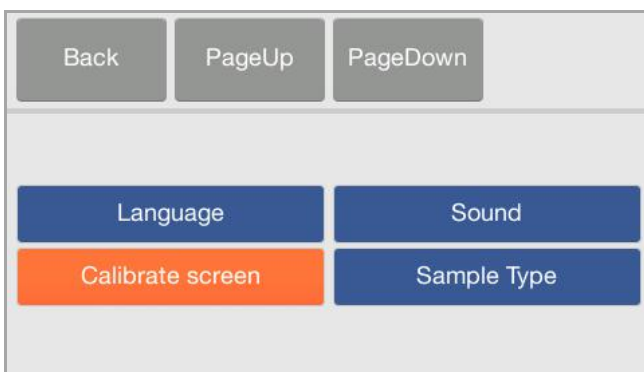
5. Press ‘**Save**’ when Date/Time is set.

5.3 Screen Calibration

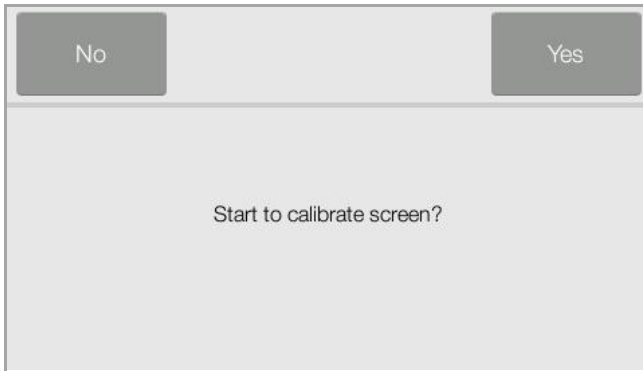
The touchscreen is calibrated by the manufacturer before shipment. If there is a problem with the touchscreen not reacting properly, the operator may recalibrate the screen.



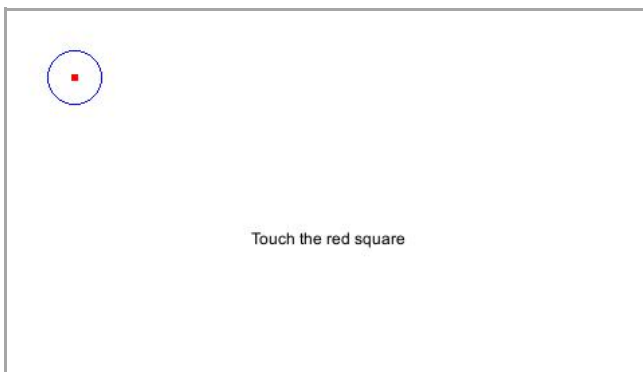
1. On the main screen, press .



2. Then press **Screen Calibration**.



3. Press 'Yes' to start the screen calibration.



4. Follow the calibration instructions on the screen exactly. Touch the targets by pressing the red targets until the screen indicates 'Release'. When the calibration procedure is complete, the analyzer will reboot automatically..

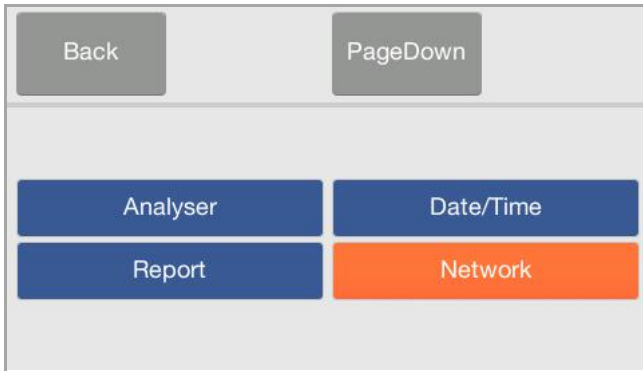
Note: If the operator does not follow the calibration instructions exactly, the analyzer will not return to setting screen. Repeat the calibration procedure until completed successfully.

5.4 Network Connection

The analyzer has a built-in WiFi module. Connecting to the internet can help you automatically download the new version of the software upgrade or uploading error logs to the Cloud server. Technical support engineers will review the error log to diagnose the analyzer's problem.



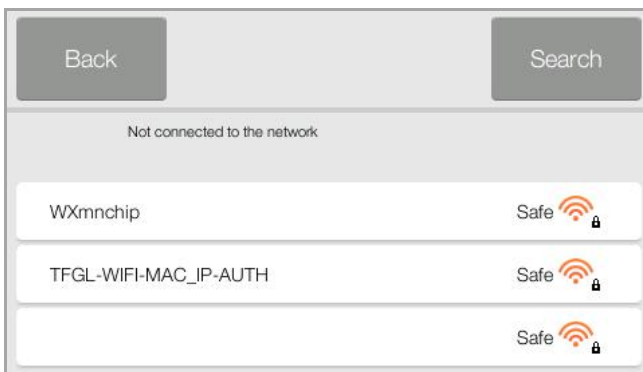
1. On the Main Screen, press  .



2. Then press **Network**.



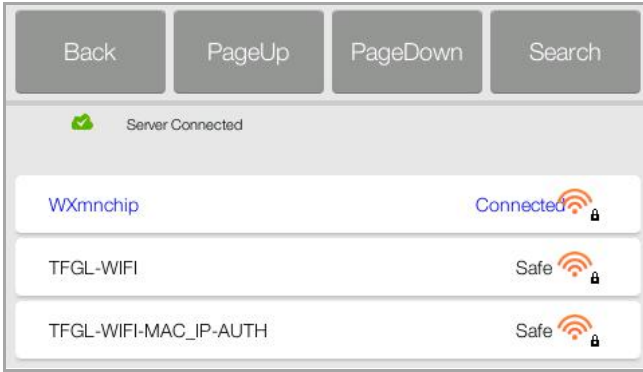
3. Press **WiFi** to show the Available Connections page on the screen.



4. Press **Search**, will show a network list. Choose a wireless network.



5. If you are connecting to a secured network, input the password (the password is only available with letters and figures). Then press **Connect**



6. The display shows the following.

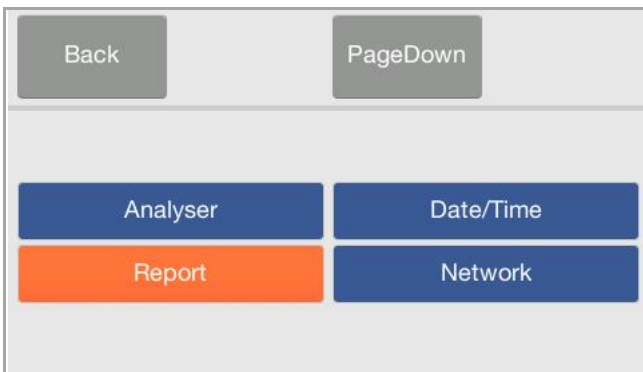
5.5 Report Layout

Using the Report Layout feature, the operator can set the reported content as needed.

Hospital Name:



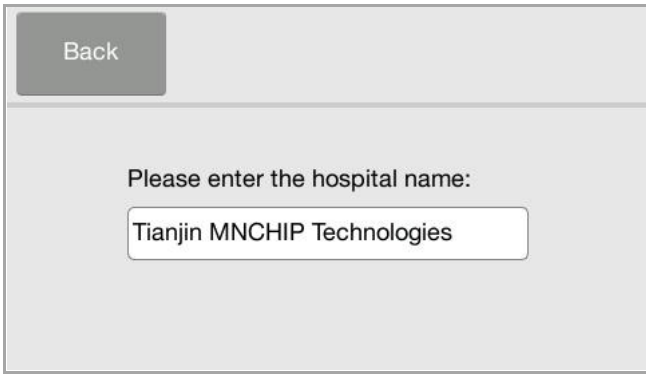
1. On the **Main Screen**, press  .



2. Then press **Report**.



3. Select '**Hospital Name**'.



4. Enter the hospital name to be displayed on the report. Then, press **'Back'**.

Species: Add/Remove/Reference Ranges

The analyser includes a number of factory-set reference ranges for use in analysis. The operator can modify these ranges as needed, as well as create or remove custom ranges or return all factory ranges to their default settings



1. On the Main Screen, press '⚙️' → **Report** → **Species**. Then the screen displays options for users to add or remove a species, load factory default, or view the reference ranges list.



2. Press **'Add'** and input the species name to add a new species. Then press **'Next'** to select **'Young'** or **'Adult'**, input reference ranges, press **'Save'**.



3. As in step 2 press **'Remove'**. Use **'Page Up'**/**'Page Down'** to select a species.



4. After pressing ‘**Yes**’ to confirm, the selected species will be removed.



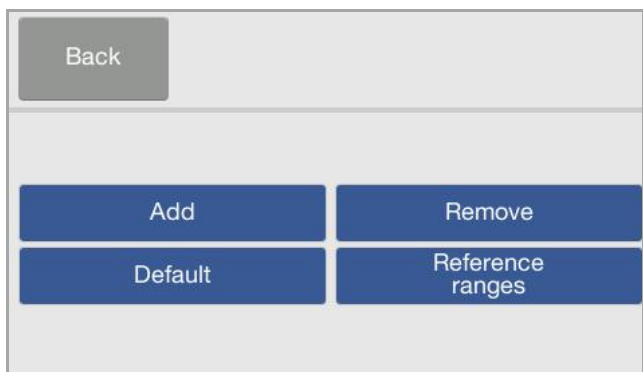
5. As in step 2 press ‘**Reference ranges**’.



6. Then select a species.

	Back		PageDown	Save	
ALB		27	45		g/L
ALP		14	120		U/L
ALT		8.2	100		U/L
AMY		400	2500		U/L

7. Then select ‘**Young**’ or ‘**Adult**’ to show parameters list. Use ‘**Page Up**’/‘**Page Down**’ to go through the list. Input values and press ‘**Save**’ to store the changes.



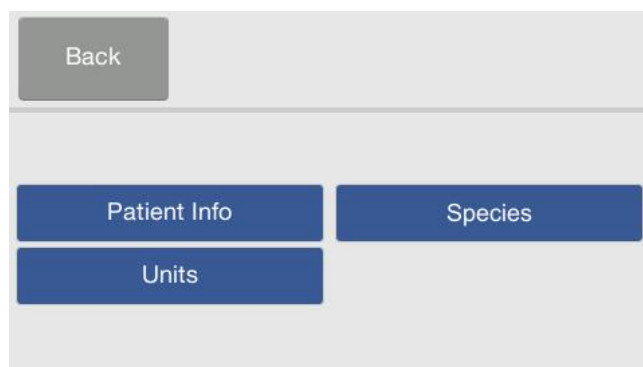
8. As in step 2 press **'Default'**,




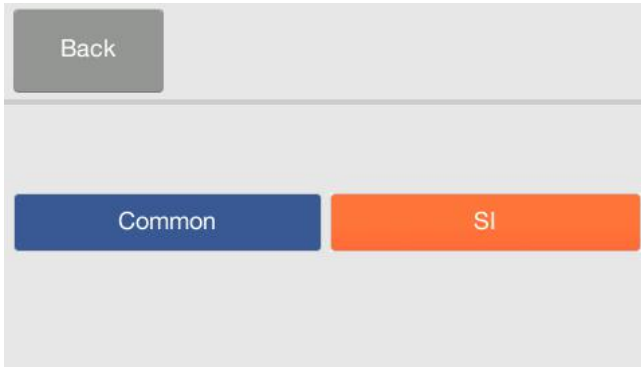
9. Press **'Yes'** to load factory default.



Units



1. On the Main Screen, press  → **Report** → **Units**.

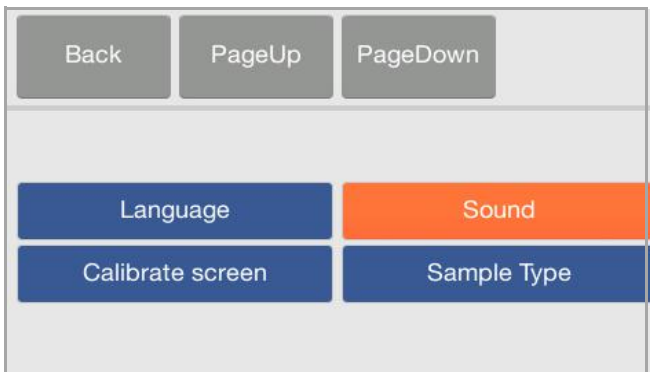


2. Select the unit to be displayed on the report.

5.6 Setting Sound



1. On the Main Screen, press  .



2. Then press '**Sound**'.

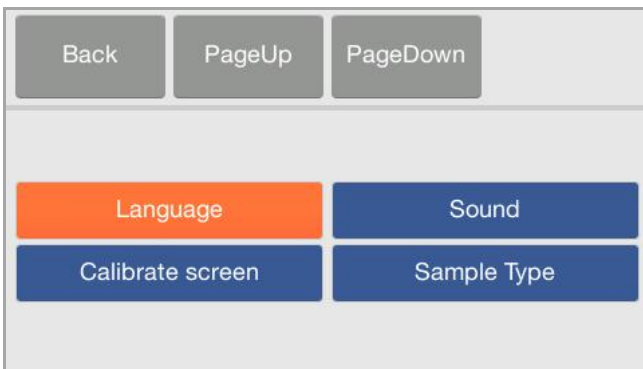


3. User can select '**Sound**' or '**Silent**' . The sound is the prompt tone of opening the analyzer and finishing the analysis.

5.7 Setting Language



1. On the Main Screen, press  .



2. Then press **'Language'**.

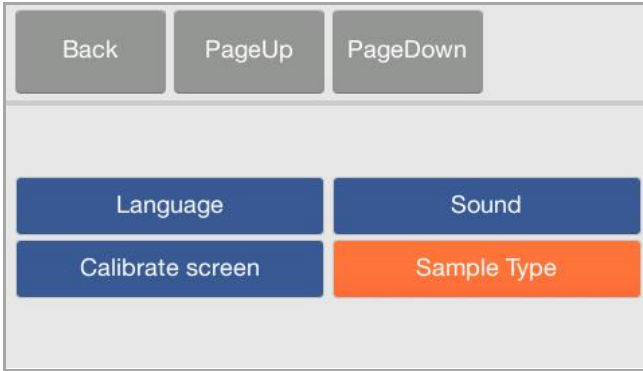


3. User can select the language required.

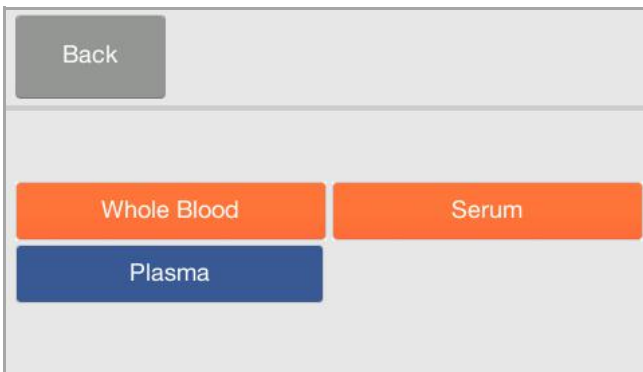
5.8 Sample Type



1. On the Main Screen, press  .



2. Then press ‘**Sample Type**’.



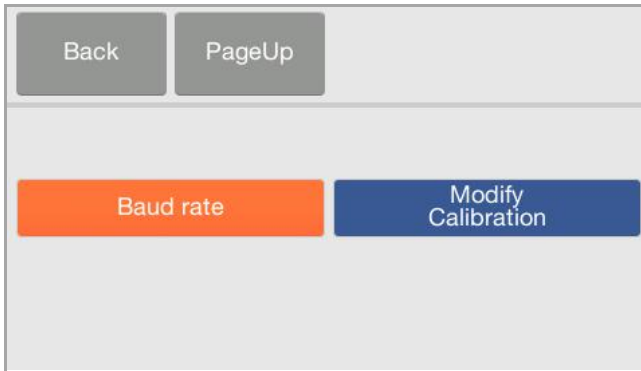
3. The user can select ‘**Whole Blood**’, ‘**Serum**’ and ‘**Plasma**’ testing mode.

5.9 Baud Rate

A data transmission rate (bits/second) for modems, used to communicate with hospital LIS system and MMDMP (See **Section 8**)



1. On the Main Screen, press  .



2. Then press **'Page Down'** → **'Baud rate'**.



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

Section 6 Troubleshooting

6.1 Electrostatic Discharge

If the analyzer experiences an electrostatic discharge while running a sample, it may ‘Crash fault’. If this happens, cancel the analysis, and then turn the analyzer off and back on after a few minutes. The analyser will return back to normal after this operation.

6.2 Error Codes for Analyzer and Troubleshooting

The analyzer will display warning and error codes when problems occur. These error codes will assist MNCHIP Technical Support in diagnosing the problem. Before contacting MNCHIP technical support, update the log and provide the serial number.

Error code	Problem Description	Solution
0101	Multi-switch fault	<p><i>Please contact us if any questions.</i></p> <p><i>E-mail:</i> <i>service@mnchip.com</i></p> <p><i>WhatsApp:</i> <i>+86 131-6318-8628</i></p> <p><i>Refer to the Maintenance Manual (Authorized dealers only)</i></p>
0102	+12V power fault	
0103	-12V power fault	
0105	AD (AD fault)	
0107	Optical module fault	
0108	LED fault	
0109	Optical output is unstable	
0202	Drawer open fault	
0203	Drawer close fault	
0206	Motor speed fault	
0213	Temperature fault	
0214	Optical components contamination	
0215	Software error	
0216	Software error	
0220	Temperature data transmission fault	
0221	PT100 fault	
0222	Upper NTC fault	
0223	Lower NTC fault	
0224	Upper heating film fault	

0225	Lower heating film fault	
0301	FPGA fault	
0302	Scan module fault	
0303	606 board fault	

6.3 Error Codes for Reagent Disc and Troubleshooting

Error Code	Problem Description	Solution
02081	Insufficient sample	According to Section 3.3 operation requirements, add enough sample and diluent, repeat the analysis with a new reagent disc
02082	Reverse addition of sample and diluent	
0209	Insufficient diluent	
0233	The diluent container is not opened properly	
0210	Reagent disc fault	
0211	Reagent disc fault	
02133	The temperature control system fault	Please check whether the ambient temperature range is 10-30 °C
02134	The temperature control system fault	Please clean or replace the dust-proof sponge
0231	Hemolysis	Please collect a new sample for testing
0232	Lipemia	Recommend to repeat the analysis with a new disc after high speed centrifugation of the sample
0234	Reagent disc fault	Please repeat the analysis with a new reagent disc
0235	The whole blood sample may coagulate or the blood volume is too high to block the flow channel	It is recommended to centrifuge into serum or plasma for testing

Section 7 Maintenance

The analyzer requires minimal maintenance. Clean the outside of the analyzer weekly with a mild detergent and a soft, damp cloth. The air filter needs to be cleaned once every month. Regular maintenance of the analyzer ensures reliable operation.

7.1 Cleaning the Analyzer

Cleaning the Case

Clean the analyzer with a soft cloth, dampened with a mild, non-abrasive detergent or cleaning solution, 10% bleach solution or a 30% isopropyl alcohol solution. Do not spray or pour any detergents, solutions or other liquids directly onto the analyzer.

Cleaning the Display

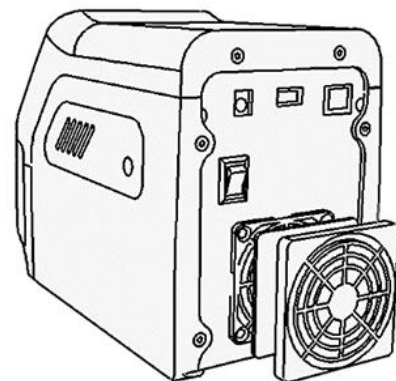
Clean the analyzer's screen periodically using a soft, lint-free cloth dampened with a glass-cleaning fluid or window cleaner. The screen can be disinfected using a 10% bleach solution: Apply the solution to a lint-free cloth and then wipe the screen.

Note: Do not use any cleaner containing alcohol. Do not spray cleaner directly onto the display — dampen the cloth instead.

7.2 Cleaning the Air Filter

The air filter at the rear of the analyser should be cleaned once per month. Check the air filter more often than once per month if the analyser is located in an environment with excessive dust or dirt. To clean the air filter:

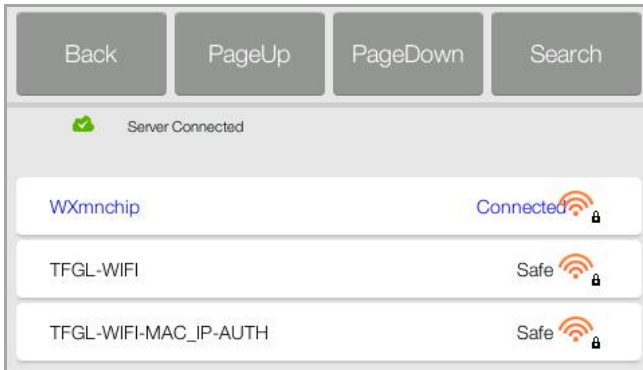
- a. Unplug the analyzer and remove the power cord from the rear of the analyzer.
- b. Open the fan cover and remove the black mesh filter.
- c. Wash the filter in warm soapy water and dry completely.
- d. Place the clean, dry filter back on the fan and tighten the fan cover.
- e. Plug the power cord into the rear of the analyzer.
- f. Plug the power cord into the power source.



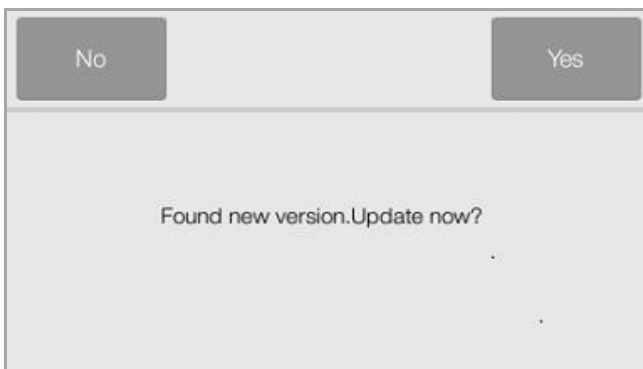
7.3 Updating the Analyzer Software

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

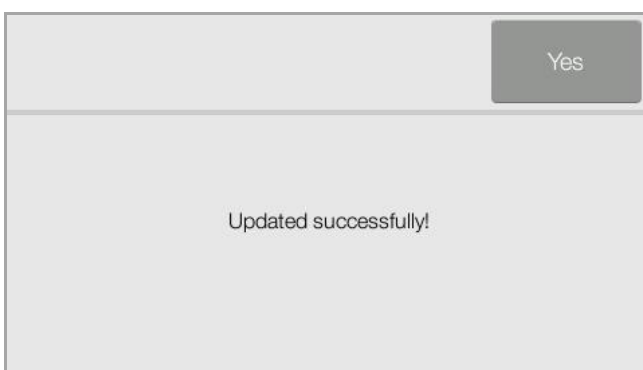
7.3.3 Automatic Update



1. Connect to a WiFi network following the procedure in **Section 5.4 Network Connection**.

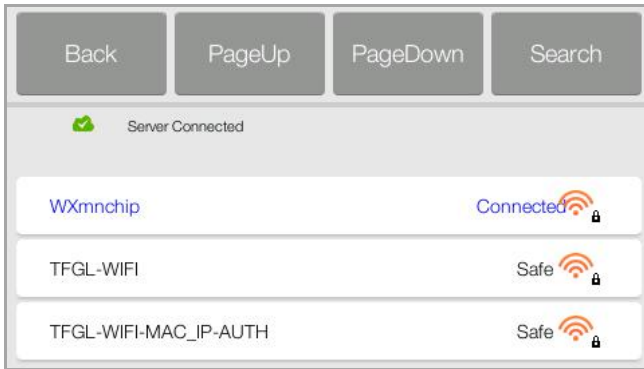


2. A 'new version' window will pop-up automatically when a new version of the software is available.
3. Press '**Yes**' to confirm.

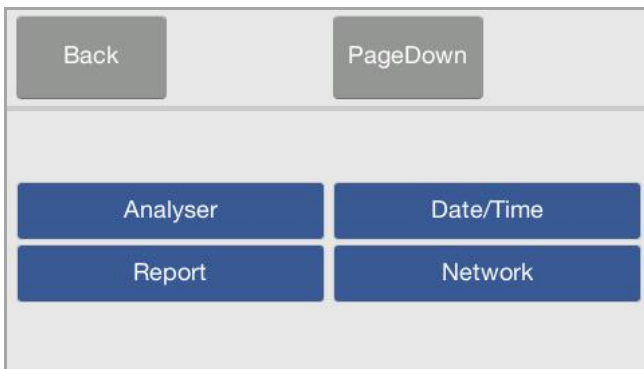



4. After pressing '**Yes**' to confirm, when updated successfully, the analyser will reboot.

7.3.4 Manual Update



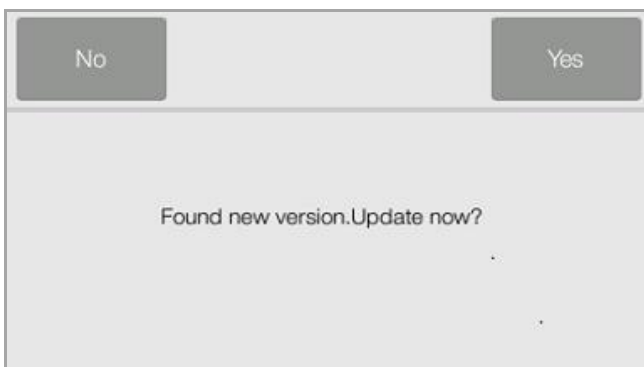
1. Connect to a WiFi network following the procedure in **Section 5.4 Network Connection**.



2. In Main Screen, press , and then press **Analyser**.



3. The analyser information page will display. Press **‘Update’** to update the software version or one of the hardware versions.

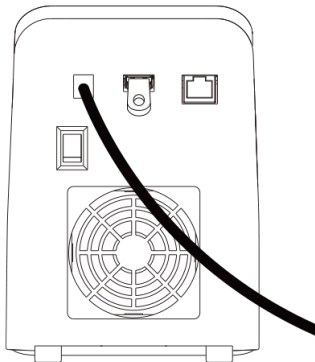


4. A ‘new version’ window will pop-up.

5. After pressing **‘Yes’** to confirm when updated successfully, the analyzer will restart.

Caution: Do not disconnect network or turn off the analyzer before the update is complete.

7.3.5 USB Drive Update



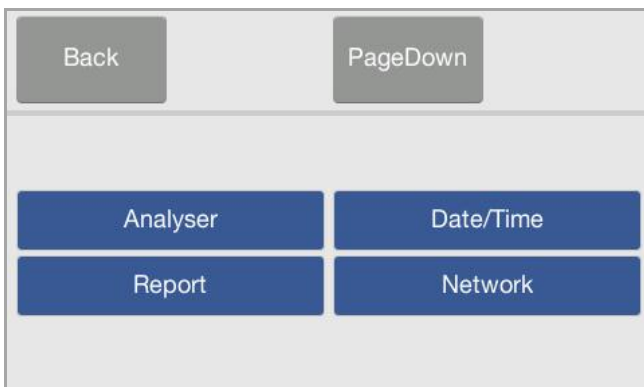
1. As an alternative method, the operating system can also be updated via the USB drive.


Note: Kingston USB is compatible with the analyzer, strongly recommend.

2. Please contact MNCHIP technical support to receive the software via email. Please copy the software to the usb flash drive's root directory 'updatesoft' after download the software. Such as:

K:\updatesoft\PointcareV3_arm.7z

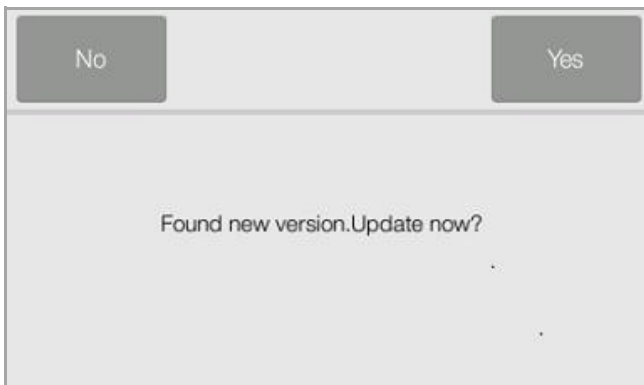
3. Plug the USB disk into the USB port at the rear of the device.



4. On the Main Screen, press  , then press Analyser.



5. The analyser information page will show. Press **Update** to update according to the software version or hardware versions.



6. A 'new version' window will pop-up.

7. After pressing 'Yes' to confirm, when updated successfully, the analyser will reboot.

Caution: Please do not insert the USB drive anywhere except the device for avoiding virus infection.

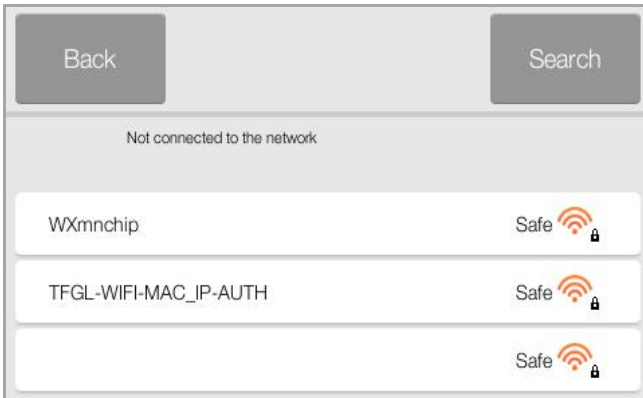
7.4 Software Recovery



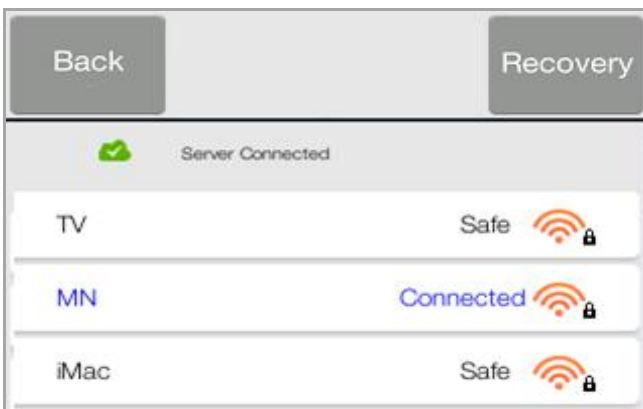
a. If the analyzer displays a recovery screen when the power is turned on, it means that the software has some basic files missing. You can use the USB drive or network to restore the system. If recovering via network, only the latest version can be restored.

b. Using USB recovery, it will only restore to the corresponding stored version, it is also recommended to get the latest version.

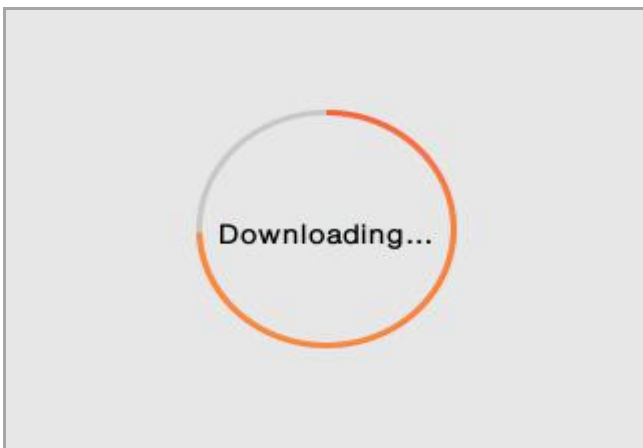
7.4.1 WiFi Recovery



1. When the user needs to restore the system through the wireless network, click the **‘Recovery with WiFi’** button, the **‘WiFi Recovery’** screen will display the available wireless network resources.



2. When the network connection is successful, the **Recovery** button will appear in the upper right corner of the screen. Click the **‘Recovery’** button.



3. The analyzer will download the system program and automatically restart upon completion.



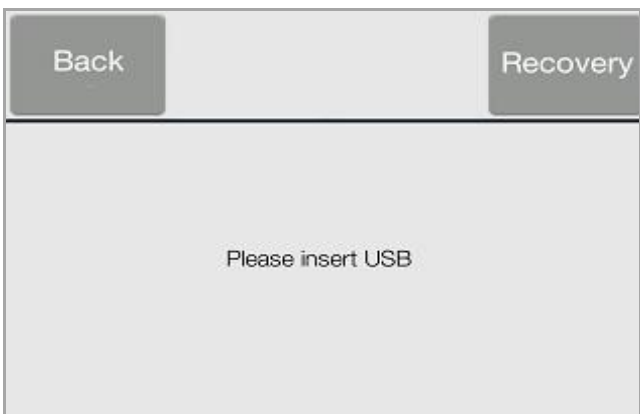
4. If the analyzer reboots normally and displays the main screen, the system is successfully restored. If the problem is not resolved, please contact us.

7.4.2 USB Drive Recovery



1. As an alternative, the operating system can also be recovered via a USB drive, please contact MNCHIP Technical Support to receive the software via email. After downloading the software, please copy the software to a USB drive. Refer to **Section 7.3**.

2. Click the **'Recovery with USB'** button.



3. The USB flash recovery mode is displayed on the screen and the USB drive is inserted into the USB port on the back of the device. Click **'Recovery'** in the upper right corner of the interface, the analyzer will automatically recover and reboot after completion.



4. If the analyzer can restart normally and display the main screen, the system is successfully restored. If the above does not solve the problem, please contact us.

7.5 Installing Thermal Printer Paper

1. Open the printer cover.
2. Remove the thermal paper package and remove a few centimetres of paper.
3. Place the paper in the printer in the direction shown with the non-printing surface is in contact with the rubber roller.
4. Close the printer cover and make sure to expose a few centimetres of paper.
5. Remove the exposed paper.

Note: After installation, the thermal side of the paper should face down. If the paper is installed incorrectly, it will not print the report.



Section 8 MNCHIP Medical Data Management Platform

8.1 MMDMP

The MNCHIP Medical Data Management Platform (MMDMP) is software that runs on Windows and interfaces with the MNCHIP Automated Chemistry Analyzer. It is primarily responsible for receiving and managing data from the analyzer. Basic functions include hospital name settings, language selection, patient information editing, result query and printing, printer settings, test results export, and more.

8.2 Installing the MMDMP

How to get software

The MMCHMP installer is available on the MNCHIP website as follows:

1. Logon the web <http://www.mnchip.com>
2. Go to the Reference Center.
3. **Download** of the MMDMP.

Note: Obtain from after-service engineer if the above method is not convenient.

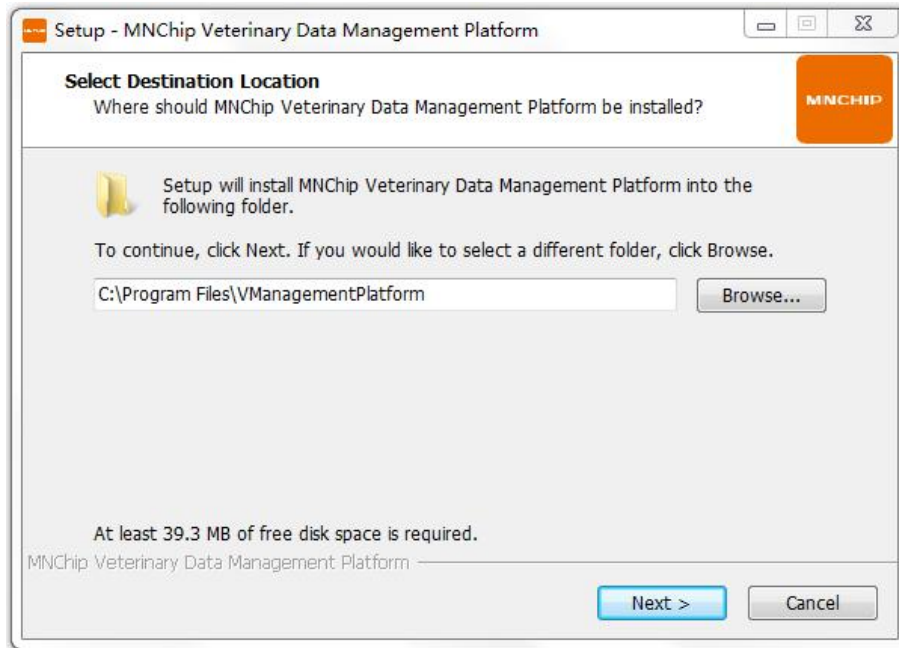
Contact : +86 131 6318 8628 (also service WhatsApp) or send E-Mail: service@mnchip.com

Setting up the MMDMP

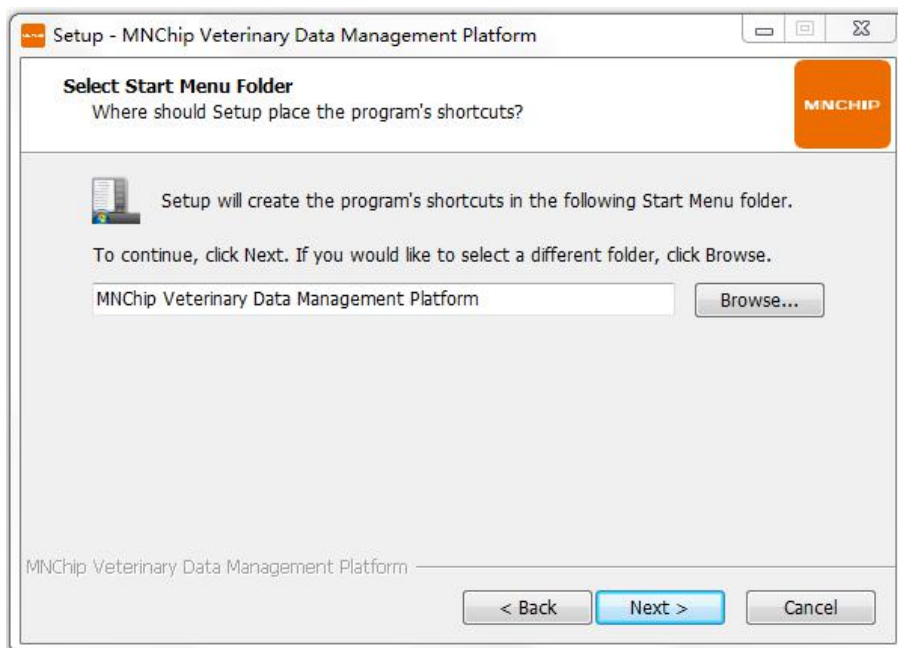
Note: Some anti-virus software may affect the installation. For the installation process, it is recommended to turn off anti-virus software.

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.

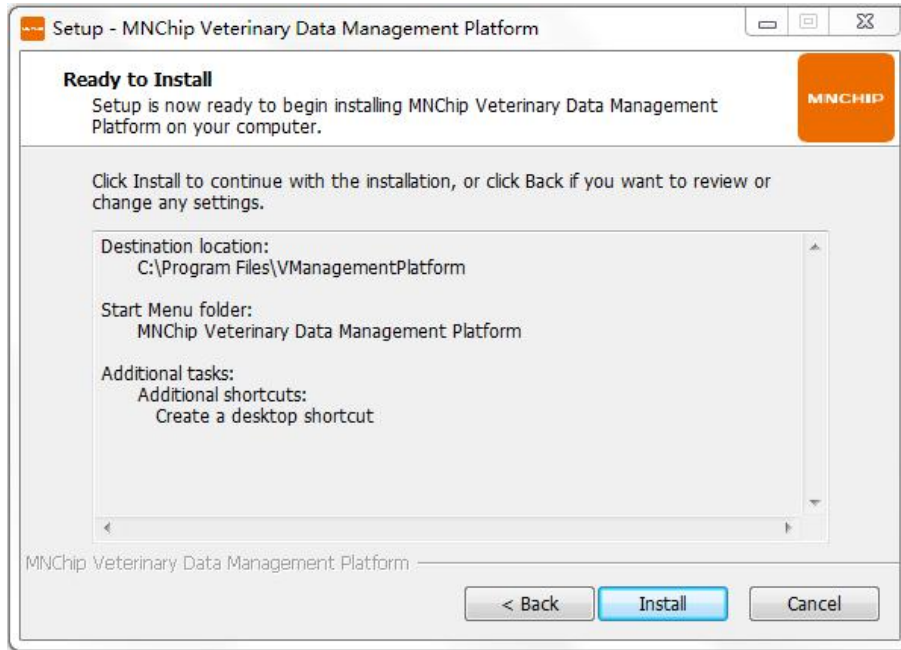
1. Start the installer and the installation prompt will appears. Please select the installation path then press **'Next'**.



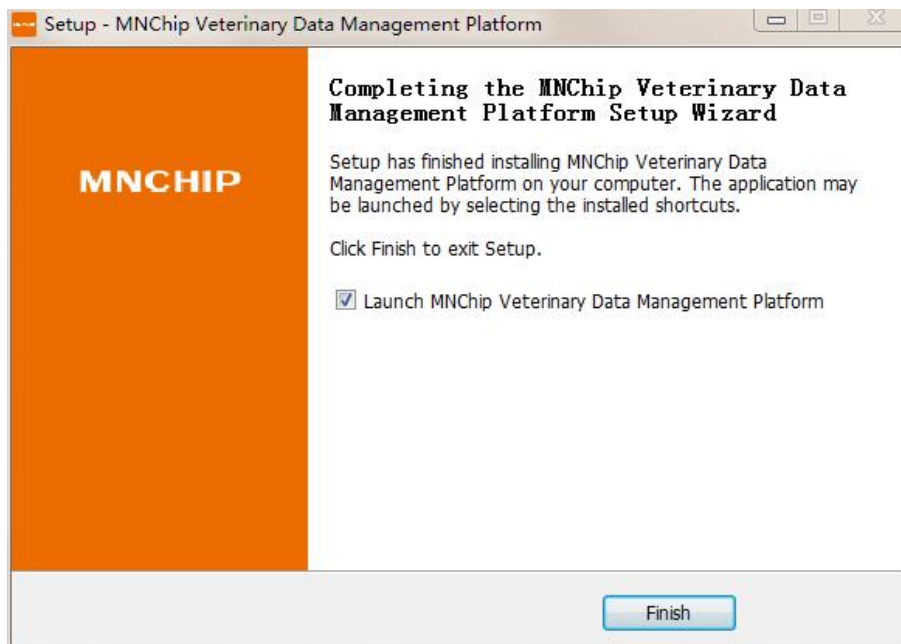
2. Select to create a program shortcut, click **'Next'** to next step.



3. Click **Install** to start the automatic installation.



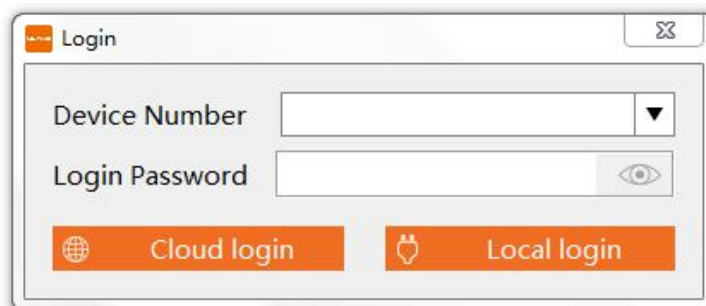
4. After the installation is complete, a confirmation dialog will pop up, click '**Finish**' to complete the installation.



Note: When the installation has finished, there will be a shortcut on the desktop of the PC.

8.3 Login

Open the ‘MNCHIP Medical Data Management Platform’ and enter the ‘**Login**’ interface.



Local login: Use the data cable to connect to the chemistry analyzer and PC. There is no need to input 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.

Cloud login: When using cloud login, the chemistry analyzer and the PC with MMDMP must be networked. The device transmits data to the cloud server through WiFi and the MMDMP software downloads the data from the server to the PC. To view the device ID and login password, go to ‘System Settings’ → ‘Device Information’ in the chemistry analyzer, enter the complete device ID and login password, and click ‘Cloud Login’.

Note: When you open the management platform software again, click ‘Cloud Login’, the software will default to the previously matched device.

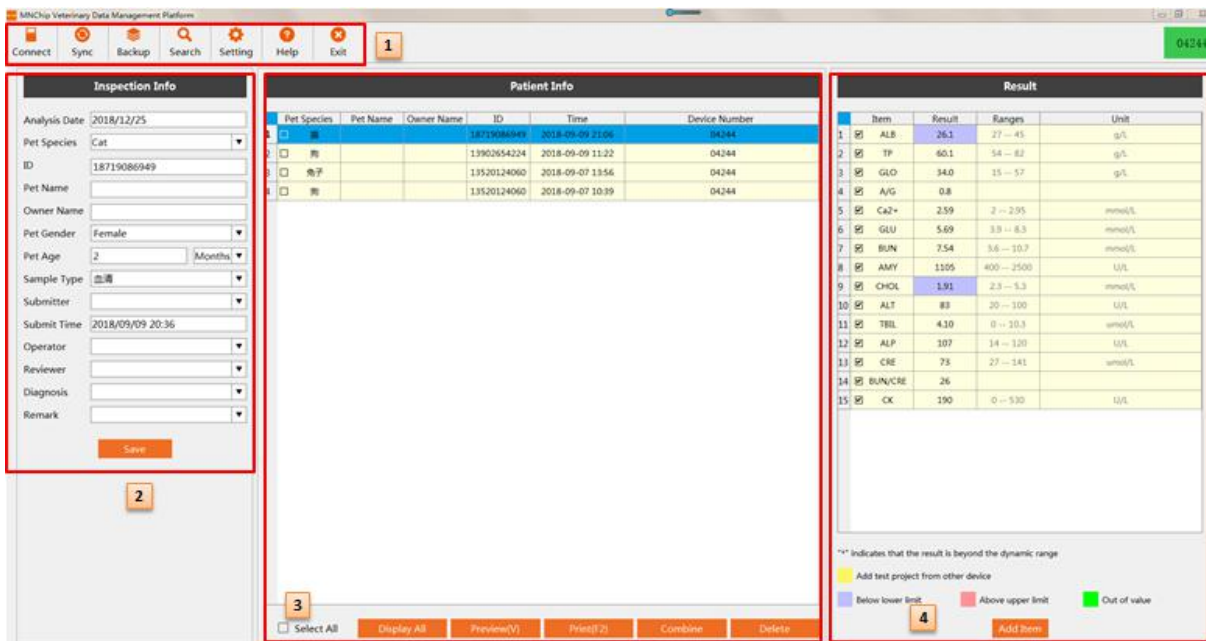
Note: If the ‘Device Info’ does not display login password, then it indicates that the device has no Internet access. Please return to the ‘System Settings’ → ‘Communication’ to reconnect to the network.

8.4 ‘Main Screen’ Description

The main interface of MMDMP is divided into four functional areas, please refer to the yellow symbols in the figure below. Shortcut toolbar ①, for data interface selection and connection, data backup and lookup, setup and help. Inspection information area ②, displaying the currently selected patient information and modifying the related information. The data selection area (patient info) ③ is mainly used for selecting a patient report to be printed. The data display area (Result)

④ is mainly used to show the patient result and ranges of the printed content.

When the test result is within the reference range, the background is ‘light yellow’; when the test result is lower than the lower limit of the reference range, the background is ‘blue’; when the test result is higher than the reference range the upper limit is ‘red’; If you combine the results of different test equipment, the results of adding other types of equipment (not the results of this chemistry analyzer), the background is ‘dark yellow’, each column can be edited.



Inspection Info: Display the patient information of the corresponding record, you can edit it, click ‘Save’ to save the modified ‘Test Information’.

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.

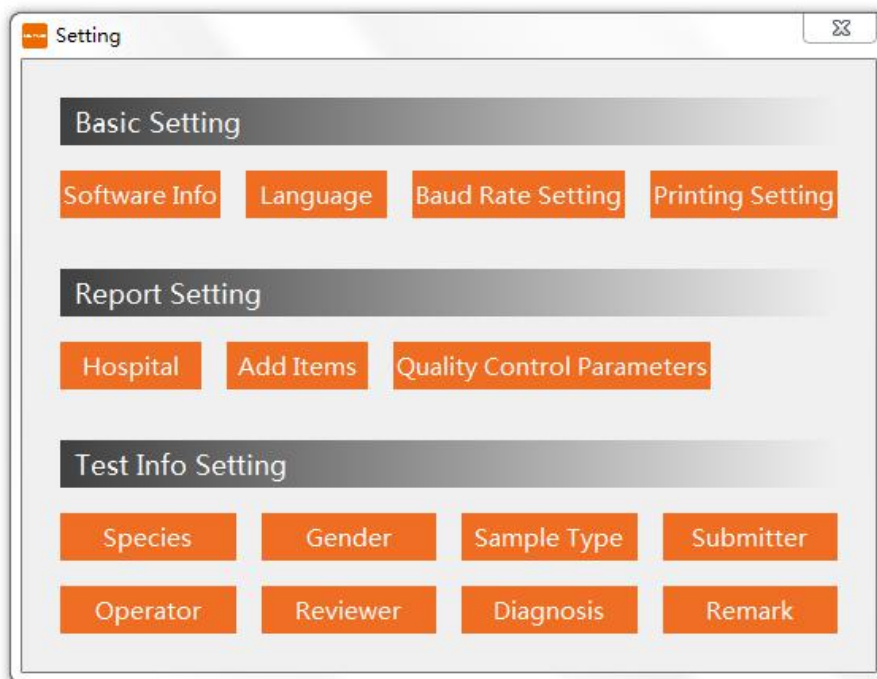
- Click **‘Combine’**: Merge selected test records and generate new test records.
Click **‘Delete’**: cancel the selected test records.

Result: The patient test results corresponding to the selected test record are displayed.

- **Modify test results:** This function can be used by the operator to modify the test results of certain items. Double-click the test value to modify the test results.
- **‘Add Test Items’:** add other test items.

8.5 Settings

Click **‘Settings’** in main screen



Basic Settings

1. Software Info: show the information of the software, click **‘Update Software’** to upgrade the software.
2. Language: select the language.
3. Set Baud Rate: set the baud rate for data transmission under **‘Wired Login’**.
4. Printing settings :

Results suggest options: **‘chart’/ ‘arrow’**.

- **A5 Portrait Print:** place A5 paper with a width of 14.8 cm and a height of 21 cm in the printer to print a report sheet

- A5 Landscape Print (default): place A5 paper with a width of 21 cm and a height of 14.8 cm in the printer to print a report sheet
- A4 Print: place A4 paper in the printer to print the report sheet
- A4 clinical significance printing: print with clinical significance of the test report, the default choice of A4 paper

Report Settings

1. Hospital: input the hospital name.
2. Add Items: use this function to combine the test items from other devices to one report, after the change is complete, click ‘Save’ → ‘Exit’.
3. Quality Control Parameters: Use this function to amend the quality control lot number, expiry date and target value. Make changes and after completion, click ‘Save’ and ‘Exit’.

Test Info Settings

Modify the ‘Test Info’ in the main interface. The hospital can preset each item in the ‘Test Info Settings’ as needed and the setting items will be displayed in the report form.

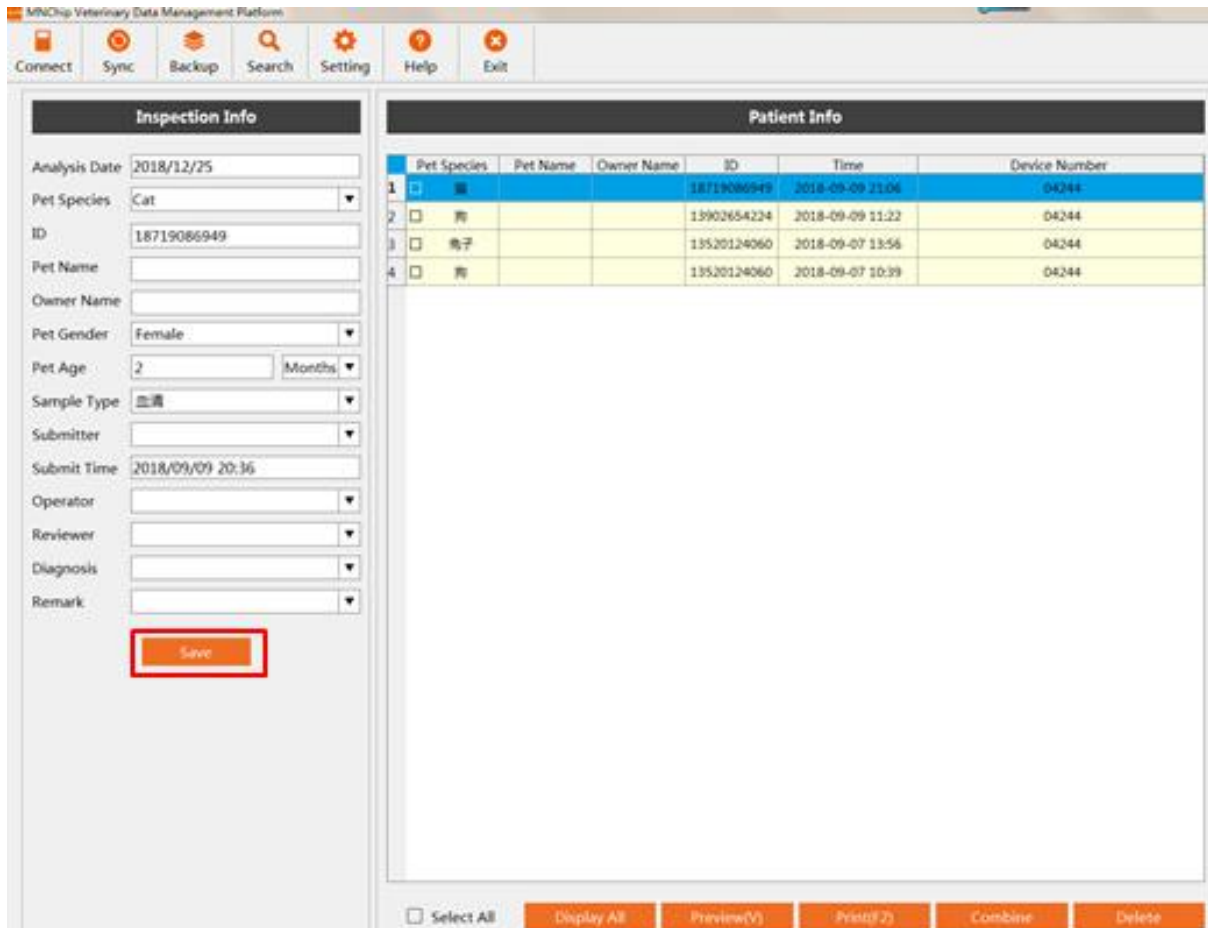
Note: ‘Inspection Note’ prompts abnormal samples (hemolysis / lipemia /jaundice) by default, hospitals can edit as per their needs In case of abnormal samples, the background of report sheet is red, while it's yellow for normal samples.

11	<input type="checkbox"/>	狗			311	2018-03-03 18:03
12	<input type="checkbox"/>	猫			306	2018-02-22 16:55
13	<input type="checkbox"/>	猫			311	2018-02-09 09:44
14	<input type="checkbox"/>	猫	red		309	2018-02-08 18:46
15	<input type="checkbox"/>	猫			309	2018-02-06 13:12
16	<input type="checkbox"/>	猫			400	2018-01-31 09:14
17	<input type="checkbox"/>	猫			396	2018-01-30 15:24
18	<input type="checkbox"/>	狗	yellow		366	2018-01-23 13:31
19	<input type="checkbox"/>	狗			302	2018-01-18 13:06
20	<input type="checkbox"/>	狗			390	2018-01-16 16:55

8.6 Advanced Settings

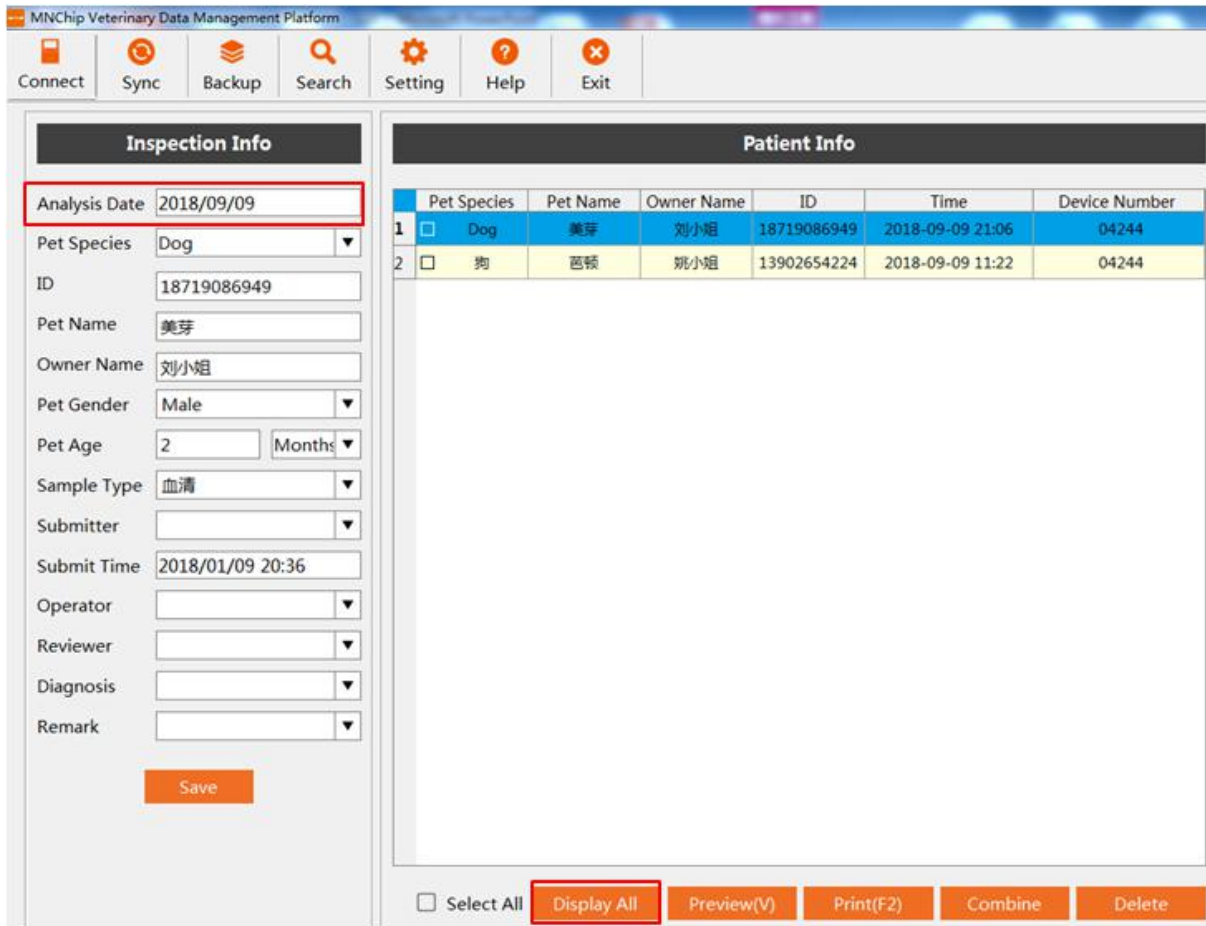
1. Change inspection Information

Select a patient and change the basic information from the inspection information area. Click ‘Save’ when the modification is complete.



2. Display All

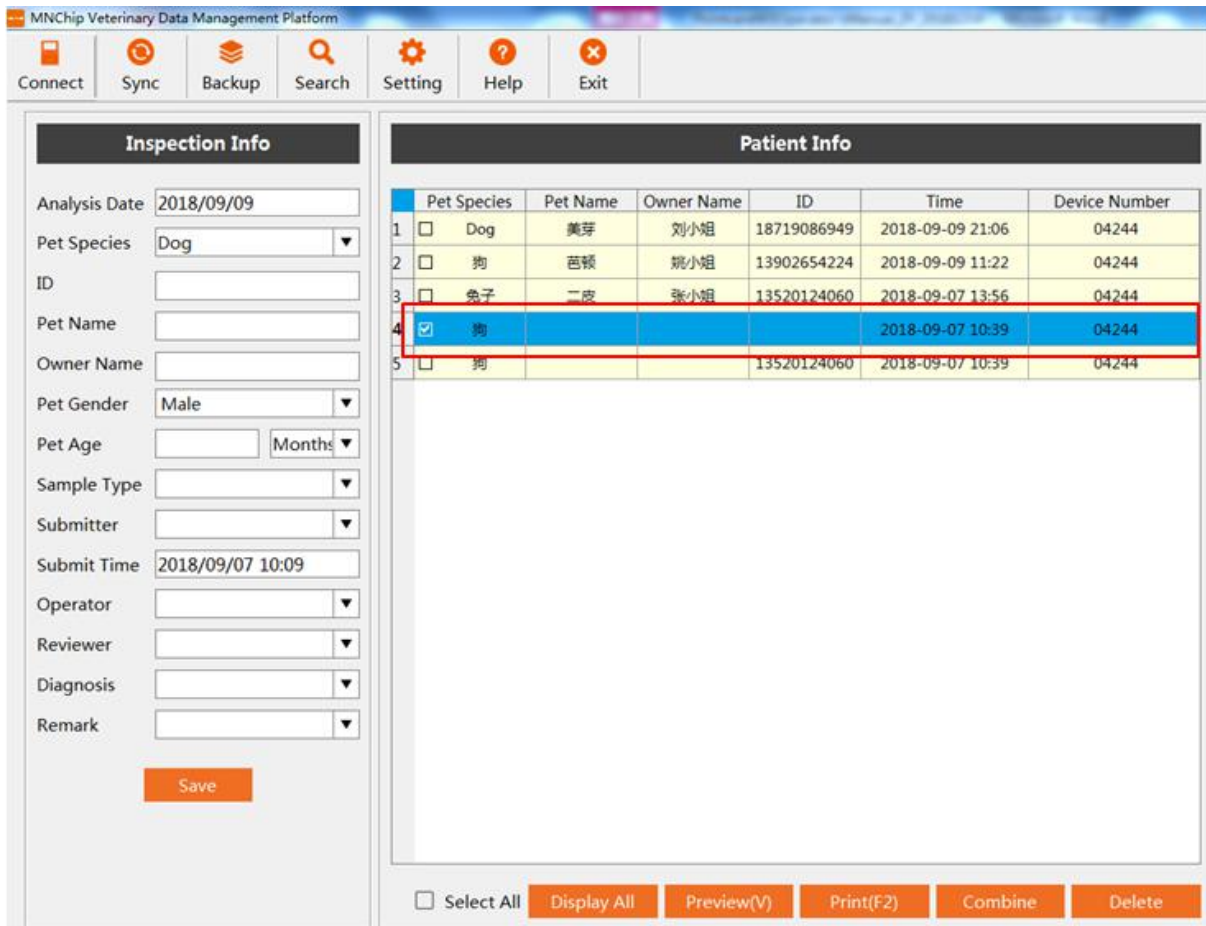
The ‘**Analysis Date**’ area of the home screen usually only displays the data for the selected date. If you want to display all test results, you can use the ‘**Display All**’ function.



3. Combine

When the same patient has been tested using different discs, it is possible to combine the two test reports into one report and the merge function can be used. First, select the reports to be merged, click the ‘**Combine**’ function and the system will generate a new report. If there are the same test items in the combined test results, the average value of the same items is taken and the different items are displayed separately.

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



4. Delete:

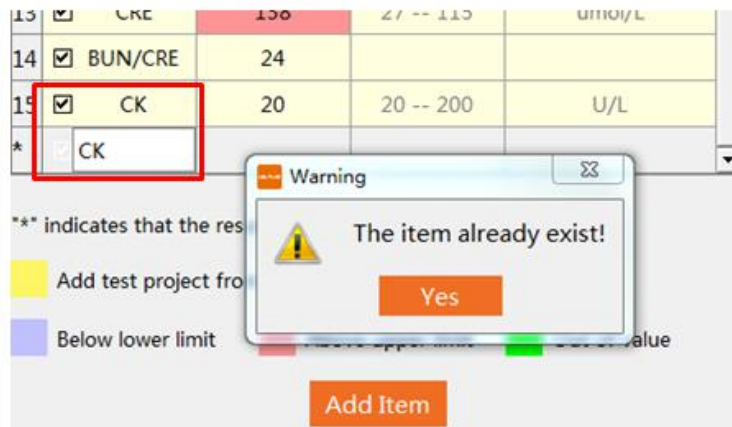
Select a result and use the Delete function to delete it.

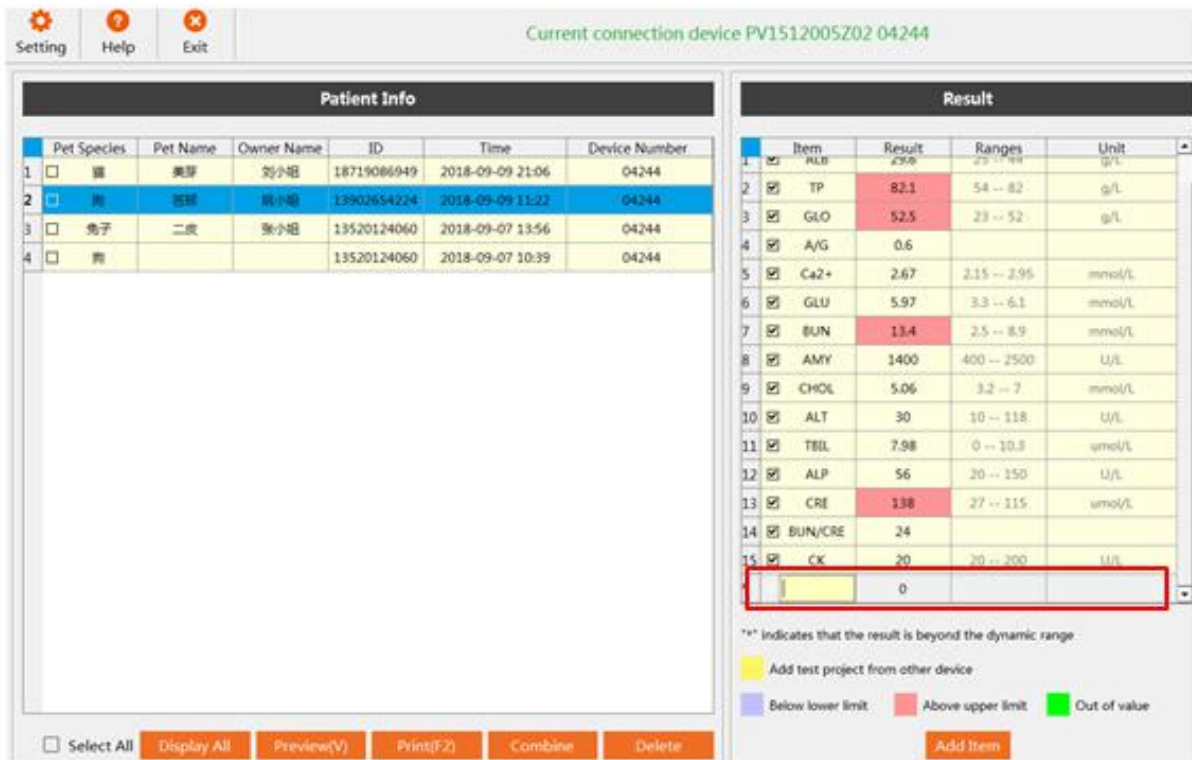
Note: If the data is deleted by mistake, it can be recovered by resynchronising the data from the analyzer.

5. Add Item:

Select a test result, click the **Add Item**, it will add a new line of items, double-click the blank space, to add the corresponding content you require.

Note: The item you wish to add can't be same as an existing item.





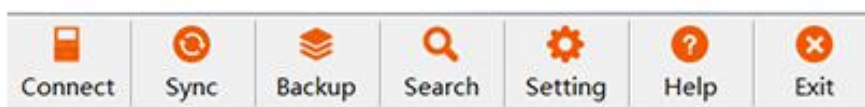
8.7 Logout and Switch to Cloud Login

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.



8.8 Capture Results Using MMDMP



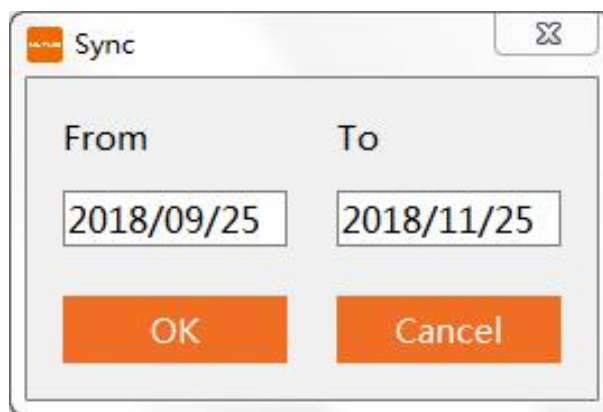
1. Click 'Connect', the management platform will search all devices currently connected, if the connection is successful, the currently connected device will be displayed on the right side of the main menu.



2. Click ‘Sync’, select the time and click ‘OK’ to synchronize the data in the device to the management platform.

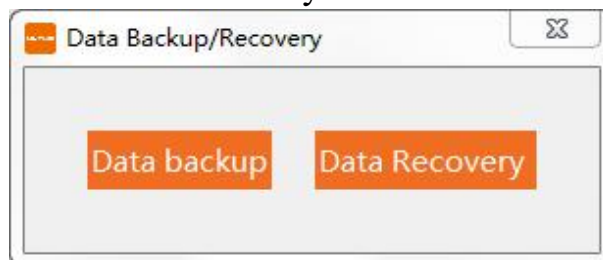
- Local connection: Synchronise data from the analyzer to the management platform software.
- Cloud connection: Synchronise data from the server to the management platform software.

Note: When opening the management platform software, the results from the day are automatically synchronised by default. If data synchronisation is unsuccessful, find the report in the chemistry analyzer's Results Query and click Upload.



3. Click ‘Backup’ to back up or restore your data.

- ‘Data Backup’: Back up data from the current management platform software to the specified path.
- ‘Data Recovery’: select the .mdb file you need to recover to recover the data.



4. Click ‘Result’ 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

5. Click ‘**Query**’ to display the screened test records that meet the conditions.

Note: If you want to display all the reports in the management platform software, click ‘Show All’ in the ‘Main Interface’.

8.9 Report Printing

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

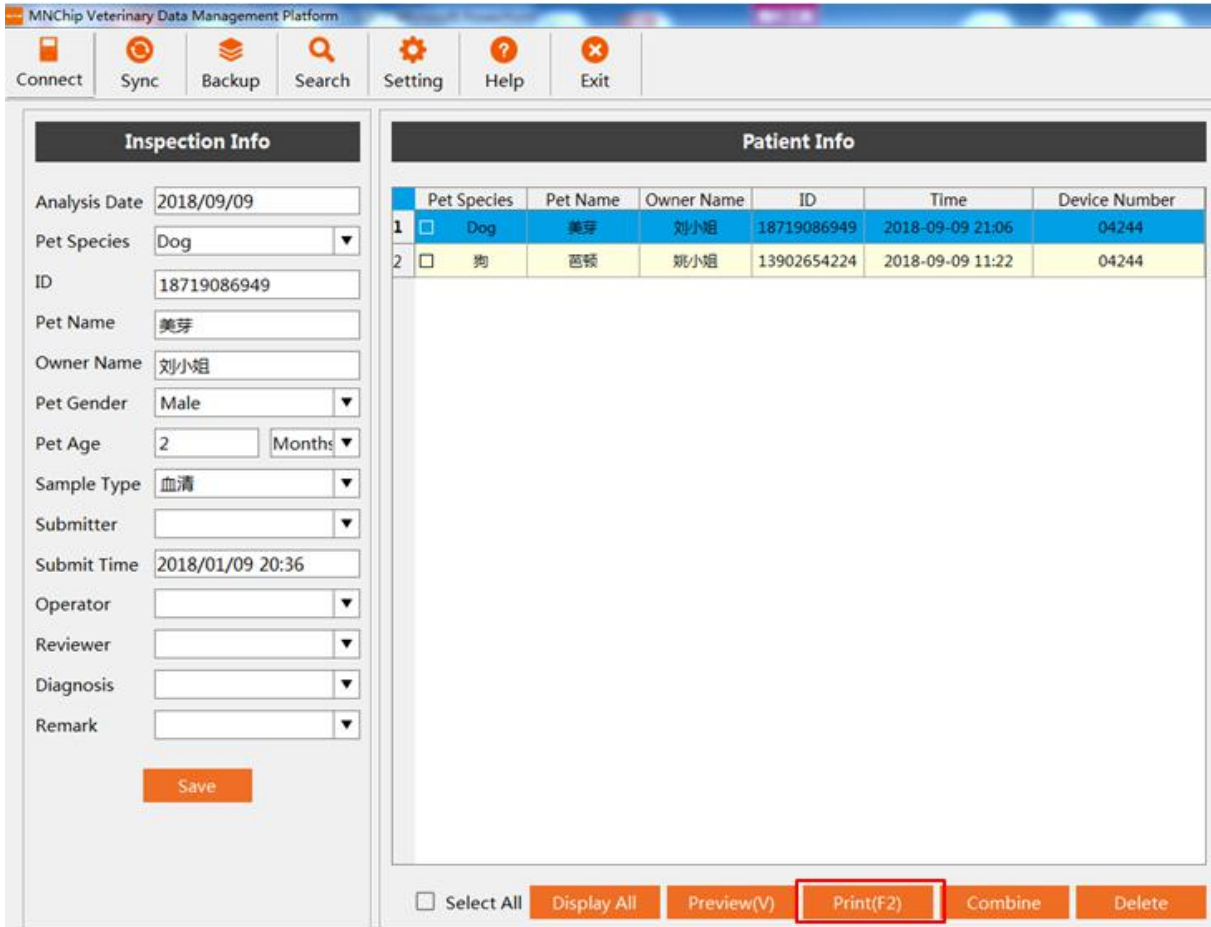
Biochemical Inspection Report

PetSpecies: 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

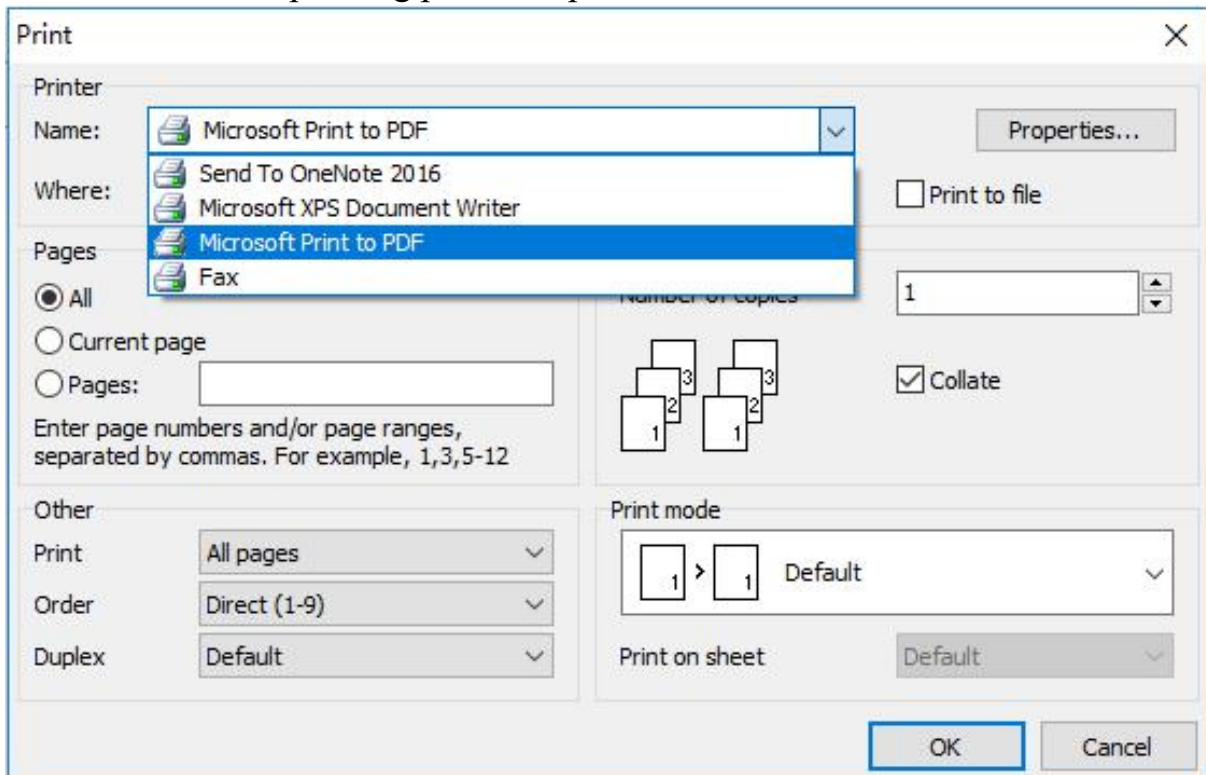
Item Name	Result	Indicator	Ranges	Unit
ALB	26.1	↓	27-45	g/L
TP	60.1		54-82	g/L
GLO	34.0		15-57	g/L
AG	0.8			
Ca2+	2.59		2-2.95	mmol/L
GLU	5.69		3.9-8.3	mmol/L
BUN	7.54		3.6-10.7	mmol/L
AMY	1105		400-2500	U/L
CHOL	1.91	↓	2.3-5.3	mmol/L
ALT	83		20-100	U/L
TBIL	4.10		0-10.3	umol/L
ALP	107		14-120	U/L
CRE	73		27-141	umol/L
BUN:CRE	26			
CK	190		0-530	U/L

Submit Datetime: 2018-01-09 20:36 Analysis Datetime: 2018-09-09 21:06 Print Datetime: 2018-12-25 15:36
 Submitter: Operator: Reviewer:
 Remark: *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 corresponding printer, please install the printer firstly. Reporter layout can be designed using the printer's report setup function.

8.10 Troubleshooting

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

1. Update the analyzer software version

Turn on the analyzer, click '**Settings**'-'**Network**' to connect to WIFI. After connecting to the Internet successfully, return to '**Settings**' - '**Analyser**' to update the analyser software to the latest version.

2. If it is '**local login**', please ensure that the data cable is connected correctly, then reboot the analyser and management platform software; if it is '**cloud login**', please make sure that the analyser and PC with the software installed are connected to the Internet.

3. Uninstall the MMDMP software and re-install the latest version

Locate the uninstallation software in the installation documentation, click *unins000.exe*, start the uninstall feature and click '**Yes**'. The software will be removed from the computer. Install the software again as described in 8.2.

