

CE

Exdia TRF Plus

User Manual





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Preface

■ Notice

Thank you for purchasing the Exdia TRF Plus.

Exdia TRF Plus is an image based immunochromatography analyzer with time resolved fluorescence analysis technology. It is an in vitro diagnostic device that provides quantitative or qualitative results from the concentration of a substance analyzed using samples of human blood or body fluids.

Before using the Exdia TRF Plus, be sure to read the instruction in user manual carefully and observe all aspects of operation, maintenance, etc.

If you have any questions or need further information, please feel free to contact Precision Biosensor Inc. Customer Support (support@precision-bio.com) or your local distributor.

■ Warranty

Exdia TRF Plus is manufactured in a proven facility and has passed strict quality control and inspection.

The warranty covers the manufacturing defects and problems that occur when used in compliance with the user manual.

For warranty service, please contact Precision Biosensor Inc. Customer Support (support@precision-bio.com) or your local distributor.

Parts replaced in the repair process become the property of Precision Biosensor Inc.

In the following cases, repair costs will be charged even during the warranty period.

- Use of components, parts, and accessories not included in the analyzer
- Modification or repair of the analyzer without permission
- Malfunction due to user's improper handling
- Failure or damage caused by external force
- Failure or damage caused by natural disaster
- Non-compliance with Exdia TRF Plus User Manual requirements



Specifications

Check the specifications before using the product.

Item	Description/Value
Model name	Exdia TRF Plus
Operating system	Linux
Display	7-inch color LCD (Resolution 800 x 480)
I/O interface	4 x USB 2.0 / 1 x RJ-45 LAN connector
User interface	Touch screen
Supported accessories	Mobile barcode reader, keyboard, mouse, USB memory (optional)
Test result	10,000 test results can be saved.
Voltage/Current	12 V DC / 5 A
Power consumption	20 W
Dimension (Width x Height x Length)	210 mm x 182 mm x 275 mm
Weight	1.6 kg
Operating temperature	10 °C–40 °C
Storage temperature	-10 °C–50 °C

















Precautions

- ▶ Use the Exdia TRF Plus as described in this user manual.
- ▶ Do not operate this Exdia TRF Plus with accessories that are not provided nor recommended by Precision Biosensor Inc.
- ▶ Designate a supervisor who will install and manage the Exdia TRF Plus. The operator should be an expert who is trained to operate the analyzer correctly.
- ▶ Check the operating environment before using the Exdia TRF Plus.
- ▶ Operating environments.
 - Place with a temperature ranging between 10 °C and 40 °C.
 - Place in which the humidity ranges between 10% and 80% (No Condensation)
 - Place where the altitude is less than 2,000m.
 - Place the analyzer on a flat surface.
 - Place with low levels of dust and proper ventilation.
 - Place where there are no physical or chemical risks.
 - Place where there is no explosive, flammable or perishable materials.
 - Place where direct sunlight can be avoided.
- ▶ Installation
 - Only use the power adaptor provided together with the analyzer. If the power is improperly supplied, the analyzer may be damaged and malfunction.
 - Only connect the power adaptor to a grounded electrical outlet.
 - Do not use if the Exdia TRF Plus is damaged or malfunctions
 - Operating the Exdia TRF Plus in an incorrect or inappropriate manner may cause an electric shock, burn, fire or other risks. Use only the power adaptor provided together with the Exdia TRF Plus .
- ▶ Use
 - Do not throw, shake or drop the analyzer. Doing so may damage internal parts, causing the analyzer to malfunction.
- ▶ Biological risk
 - If the analyzer is contaminated with a sample, be sure to clean it before use.
 - Wear protective equipment such as gloves and masks to prevent infection or contamination.



Symbols

Symbol	Description
	Direct current (DC)
	Caution
	This analyzer meets the requirements of Directive 98/79/EC on in vitro diagnostic medical devices.
	Look for descriptions or refer to the user manual for the correct and safe use of the analyzer.
	Catalog No.
	Serial No.
	Manufacturer
	Agent of the European Community
	In vitro diagnostics medical apparatus
	Limitation of temperature for storage
	Manufacturing date
	Caution! Risk of electrical shock
	Biological risk
	Waste disposal guidelines for electronic and electrical equipment



Summary

Before using the product, check the overall information, composition, part name and installation method of the product.



Introduction

The Exdia TRF Plus is an image based immunochromatographic analyzer with time resolved fluorescence analysis technology which provides qualitative and quantitative test results.

Exdia TRF Plus analyzers can be used with Exdia cassettes to analyze specific in vitro analytes in human specimens.

Using the built-in printer and data management software, all patient information can be printed or sent to a central information system.

The wide 7-inch color LCD touch screen and a detailed step-by-step instruction makes the analyzer easy to operate.

<Main Functions>

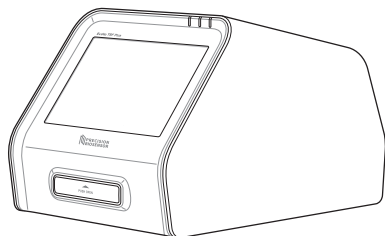
- 7-inch color LCD touch screen
- Quantitative and qualitative analysis for POCT
- LIS/HIS interface software
- Remote access
- Barcode and QR code
- Quality control using external quality material.
- Stores a total of 10,000 sample and quality control data.

<Convenient Functions>

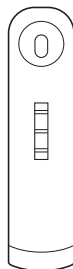
- Data management
- Internal printer (for thermal transfer).
- Operator management
- External printers supported (optional).

◆ Components

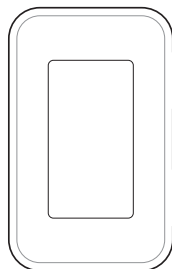
This analyzer is composed of the following components.



Exdia TRF Plus Analyzer



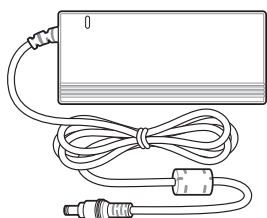
IQC cassette



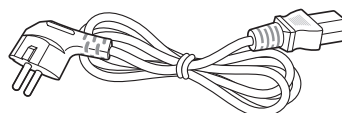
IQC cassette case



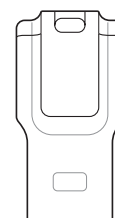
Touch pen



AC/DC adaptor
(12 V, 5 A)



Power cable



USB disk
(Built-in manual)



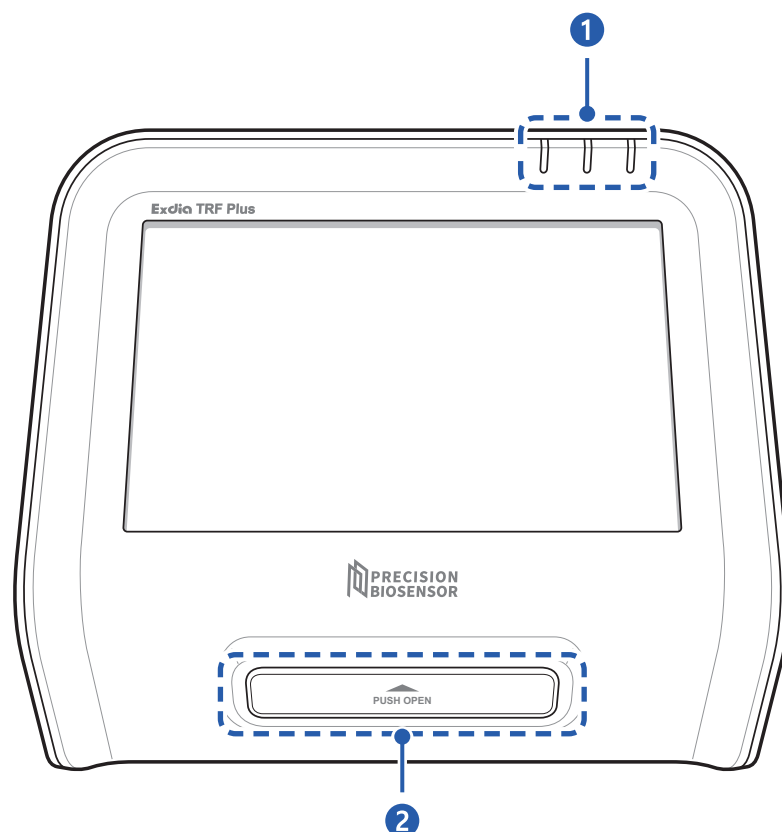
Note

If any component is missing, or if you have any questions regarding the components, contact the Customer Support Team. (e-mail address: support@precision-bio.com)

◆ System Description

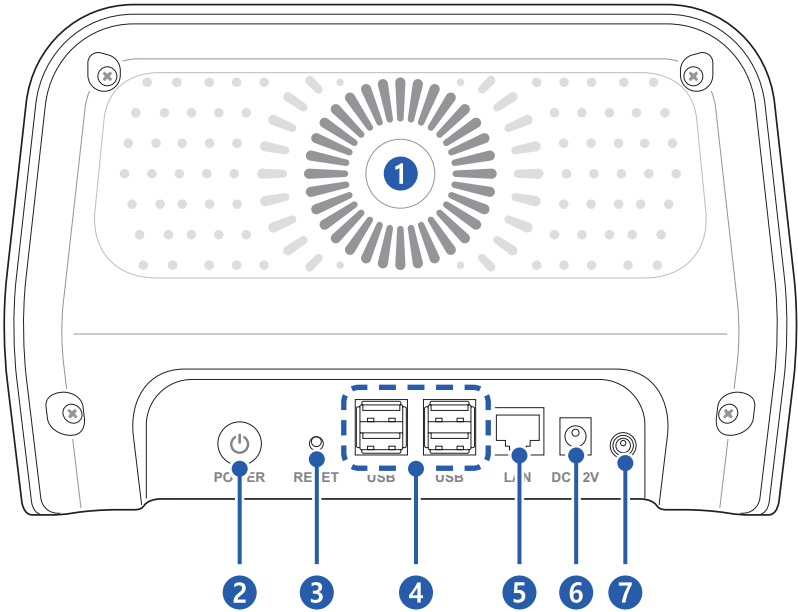
Before installing the analyzer, check the system description below to operate the analyzer efficiently.

■ Front



No.	Name	Description
①	Status indication LED	<p>Indicates the analyzer status using a colored LED.</p> <ul style="list-style-type: none"> • OFF: The analyzer is turned off. • GREEN: The analyzer is turned on. • BLUE: The analyzer is testing a sample. • RED: A power supply is not connected to the analyzer, but the analyzer is turned on. <p>(Even when the power is not supplied to the analyzer, the analyzer can be operated for up to 1 hour and 30 minutes using the built-in battery. When a power supply is connected, the battery will be charged.)</p>
②	Cassette slot	In addition to the Exdia cassette, the IQC and QR cards can be inserted.

■ Back side



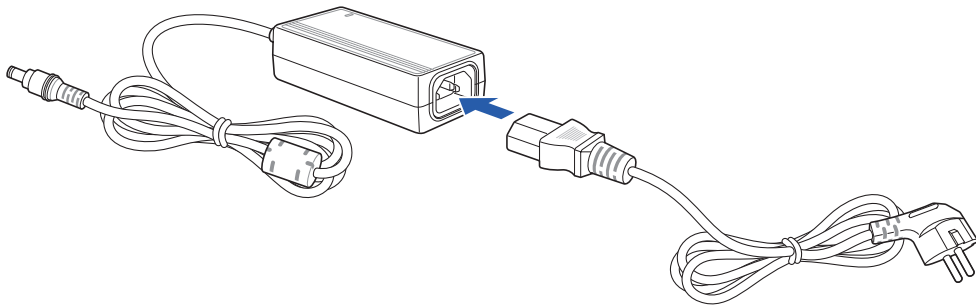
No.	Name
①	Vent
②	Power button (The power can be turned on or off.)
③	Reset button (Press the Reset button with a thin pin to turn off the system if the analyzer does not operate normally. To turn back on the system, press the Power button.)
④	USB port
⑤	LAN port
⑥	DC adaptor jack
⑦	Temperature sensor

◆ Installation

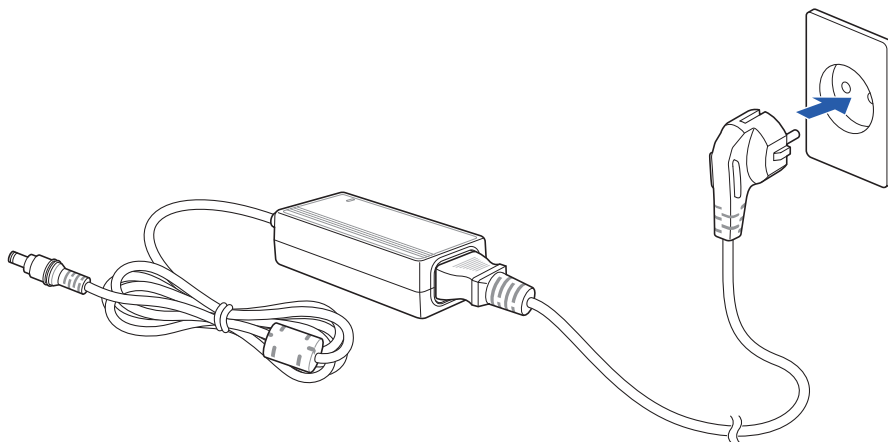
**Caution**

- Install the analyzer on a flat surface.
- Check the voltage supply before connecting the power supply. The voltage range should be between 100 V and 240 V.

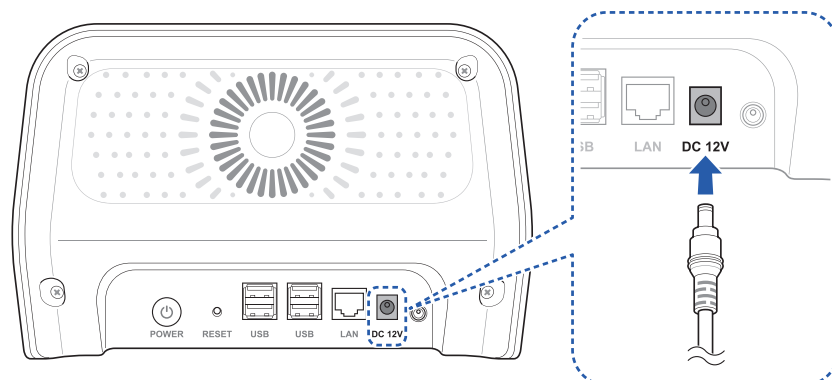
1. Connect the power cable and AC/DC adaptor.



2. Connect the power cable to an electrical outlet.



3. Connect the AC/DC adaptor to the DC adaptor jack on the back of the analyzer.



Operation

This is the description for using the analyzer after it is installed.

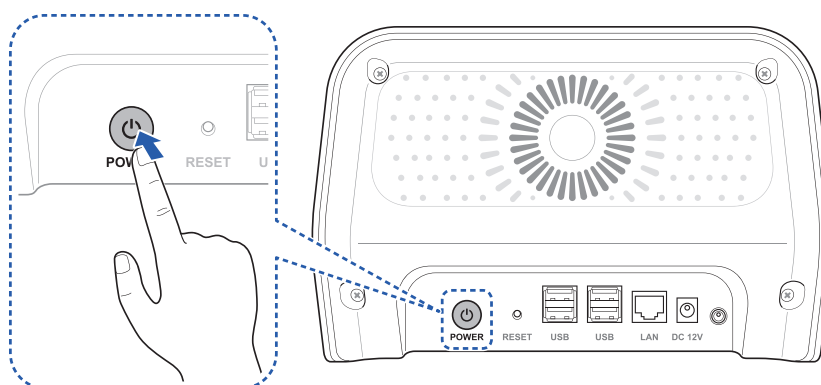


Caution

Use the Exdia TRF Plus only for an in vitro diagnostic purposes.

◆ Power On

Press the **[Power]** button on the back of the analyzer.



The analyzer to which this user manual refers to may differ slightly from the actual analyzer according to the customer's requirements.

◆ Registration

When you turn on the analyzer for the first time, the Supervisor Registration screen will appear. When you register the supervisor information and press the **[Register]** button, registration will be completed.



Note

- The operator registered initially in the Exdia TRF Plus is registered as the supervisor.
- For registering an additional operator, refer to **“Operator”** on page 77.

■ Supervisor Registration

Item	Description
Supervisor Registration	<p>Register a supervisor by entering the required information.</p> <ul style="list-style-type: none"> • ID: Enter ID. • Password: Enter the password. • Confirm(PW): Enter the password again. • Name: Enter the name. • Organization: Enter the organization. • Department: Enter the department. • Register: Press this button to register the entered information. • At least four or more letters should be entered for ID, Password and Confirm(PW), and ID and Password should not be the same. • Up to 20 letters can be entered for ID, Password and Confirm(PW).

After the supervisor is registered, the initial setting screen will appear.

Initial Settings

The 'Initial Settings' screen displays various configuration options. On the left is a vertical menu with buttons: 'Date / Time / Language' (highlighted), 'Network / LIS', 'Printer / Sound', 'Advanced', 'Service', 'Quality Control', and 'Confirm'. The main area is divided into sections: 'Date Format' with buttons 'Y-M-D', 'D-M-Y', and 'M-D-Y'; 'Time Format' with buttons '12H' and '24H' (highlighted); 'System Date' with 'Sync' and 'Set' buttons and numeric input fields for Year (2019), Month (6), and Day (20); 'System Time' with numeric input fields for hour (14) and minute (2), and 'AM'/'PM' buttons; and 'Language' with checkboxes for English, 简体中文, italiano, українська, and español de España. A status bar at the bottom shows icons for connectivity and the date/time '2019/06/20 14:02'.

Set the date and time first, and after completing other settings, press the **[Confirm]** button.

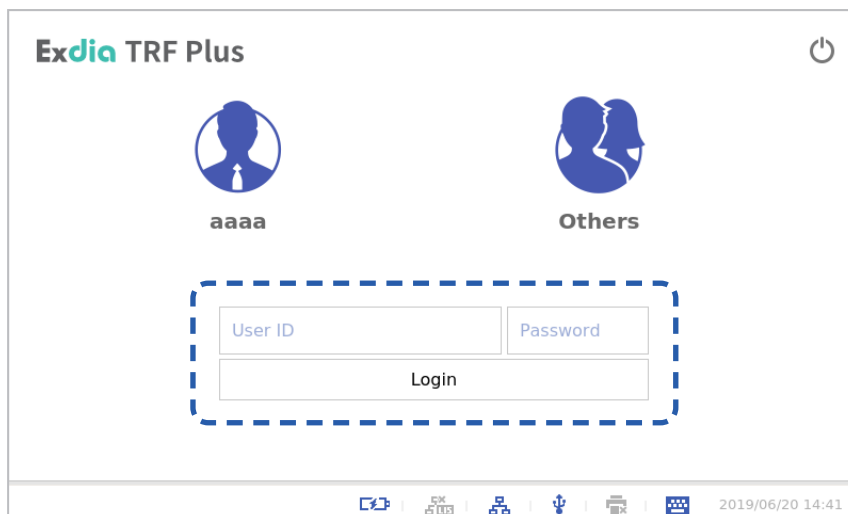
This screenshot is identical to the previous one, but the 'Confirm' button in the left-hand menu is highlighted with a dashed blue rectangular border, indicating it is the next step in the process.

The 'Initial Setting' screen appears. Press the **[OK]** button to complete the initial registration. When you press the **[Cancel]** button, you can reset the initial setting values.

An 'Initial Setting' dialog box is overlaid on the settings screen. It features a large question mark icon and the text 'Have you checked all Menu in Settings?'. At the bottom of the dialog are two buttons: 'OK' (highlighted with a dashed blue border) and 'Cancel'. The background settings screen is dimmed but still visible.

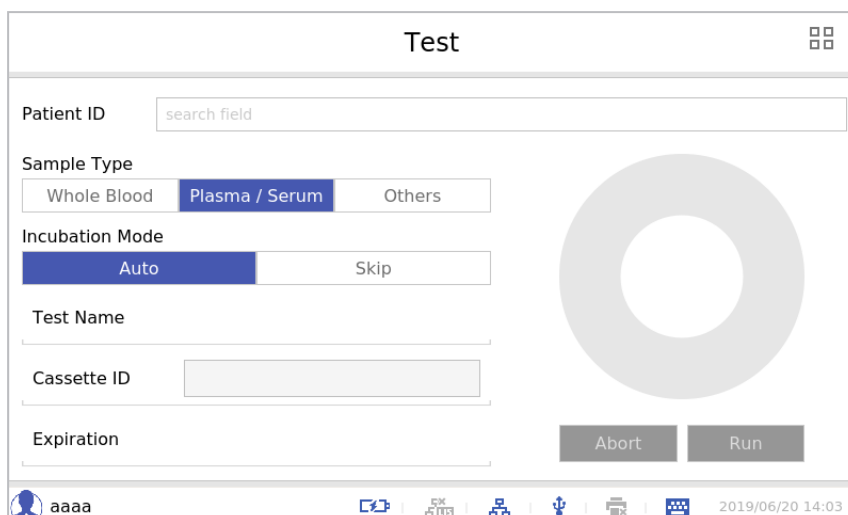
◆ Login

Log in is required to operate the analyzer. Enter ID and Password and press the **[Login]** button.



The login screen displays the 'Exdia TRF Plus' title and a power icon in the top right. Two user icons are shown: 'aaaa' (a single person) and 'Others' (two people). Below these is a dashed blue box containing a 'User ID' field, a 'Password' field, and a 'Login' button. The bottom status bar includes various system icons and the date/time '2019/06/20 14:41'.

The 'Test' screen appears.



The test screen is titled 'Test' and features a search field for 'Patient ID'. Under 'Sample Type', 'Plasma / Serum' is selected. 'Incubation Mode' has 'Auto' selected. Fields for 'Test Name', 'Cassette ID', and 'Expiration' are present. A large circular progress indicator is on the right. 'Abort' and 'Run' buttons are at the bottom right. The bottom status bar shows the user 'aaaa' and the date/time '2019/06/20 14:03'.



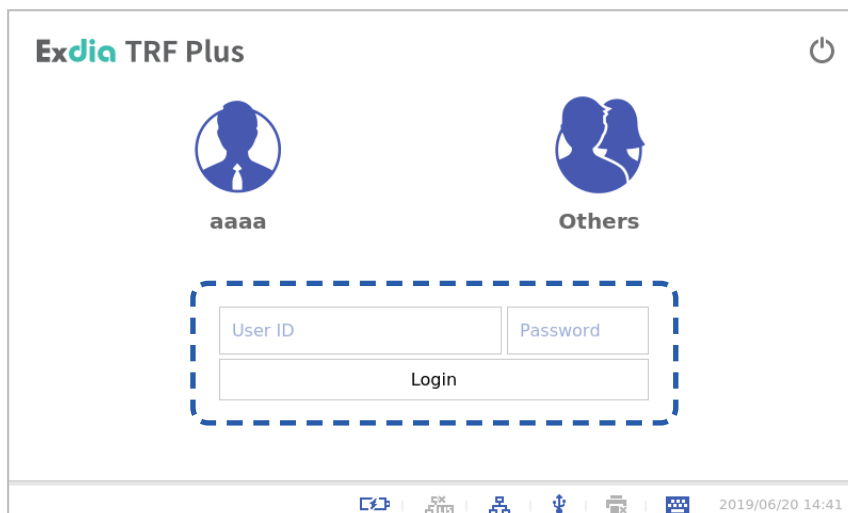
Note

- To carry out the test, refer to **“Testing”** on page 24.
- To learn more about the menu, refer to **“Menu”** on page 18.

◆ Menu

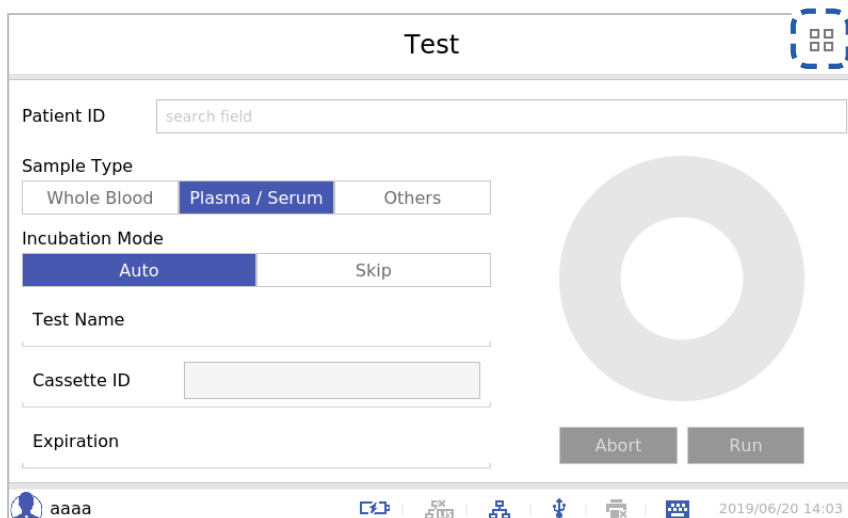
The analyzer has various menus. Check each menu before using the analyzer.

1. Enter ID and the password and press the **[Login]** button.



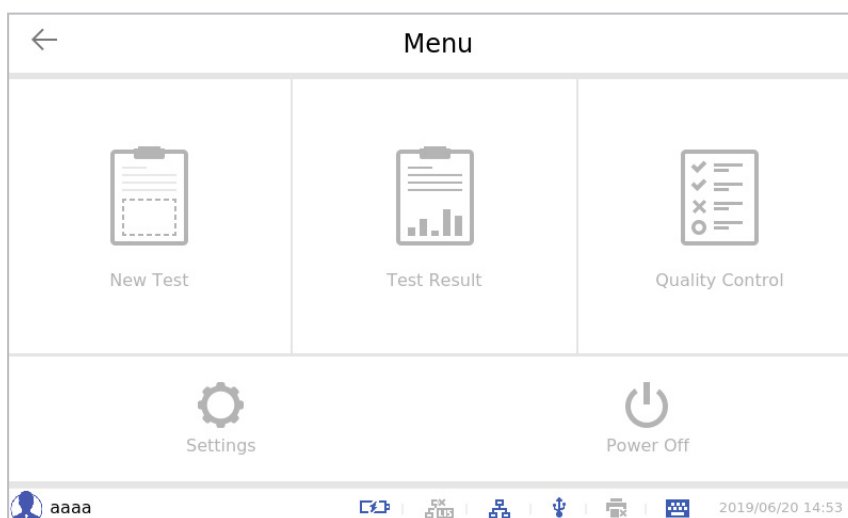
The login screen for the Exdia TRF Plus analyzer. It features the title 'Exdia TRF Plus' at the top left and a power icon at the top right. Below the title are two user selection icons: a single person icon labeled 'aaaa' and a group of people icon labeled 'Others'. In the center, there is a dashed blue box containing a login form with fields for 'User ID' and 'Password', and a 'Login' button. At the bottom, there is a status bar with various icons and the date/time '2019/06/20 14:41'.

2. The 'Test' screen appears. Press the  button.



The 'Test' screen for the Exdia TRF Plus analyzer. It has a title bar with the word 'Test' and a dashed blue box icon. The screen contains several input fields and buttons. On the left, there is a 'Patient ID' search field, a 'Sample Type' selector with options 'Whole Blood', 'Plasma / Serum' (selected), and 'Others', an 'Incubation Mode' selector with options 'Auto' (selected) and 'Skip', and fields for 'Test Name', 'Cassette ID', and 'Expiration'. On the right, there is a large circular graphic. At the bottom right, there are 'Abort' and 'Run' buttons. The status bar at the bottom shows the user 'aaaa', various icons, and the date/time '2019/06/20 14:03'.

3. The 'Menu' screen is displayed.

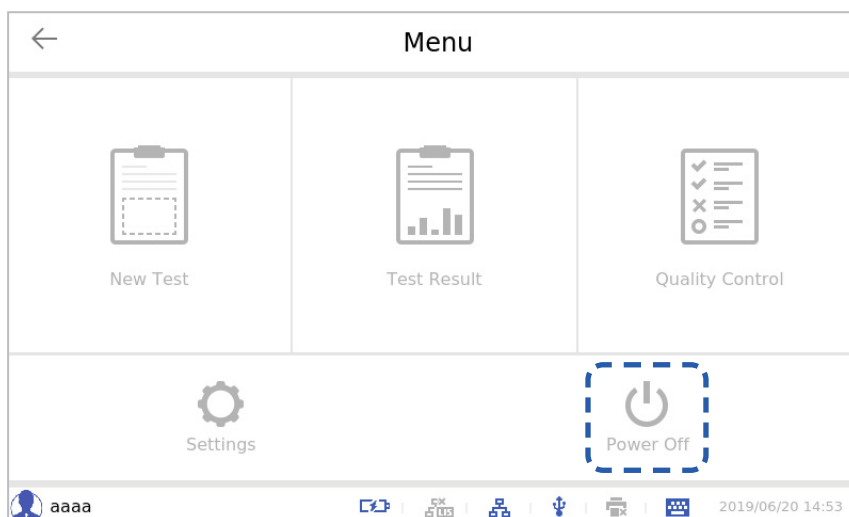


Main menu	Sub menu	Description
New Test		Carry out a new test.
Test Result	Test Result	View the previous test result.
	External QC Result	View the previous external QC result.
Quality Control	Analyzer System Check	Check the normal operation status of the analyzer using the IQC cassette.
	External QC	Carry out the external QC test.
Settings		Change various settings.
Power Off	Log Out	Log out the current operator.
	Power Off	Turn the power off.

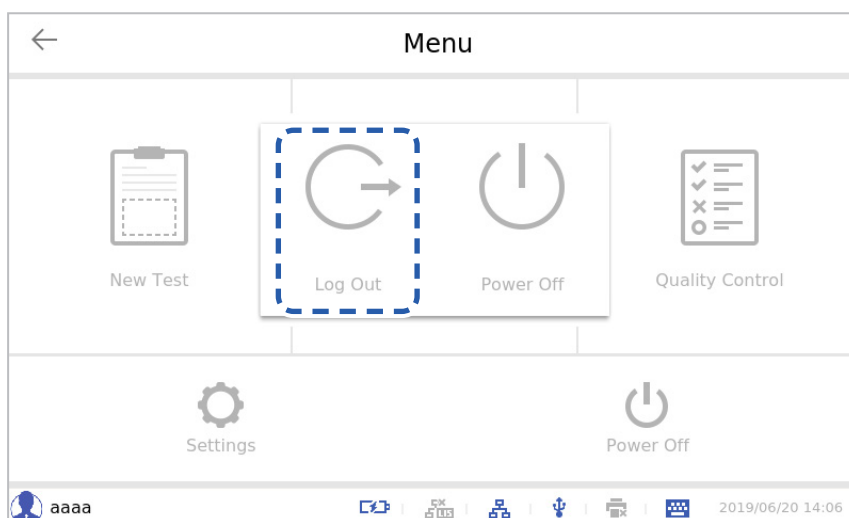
◆ Log Out

Log out and switch the operator.

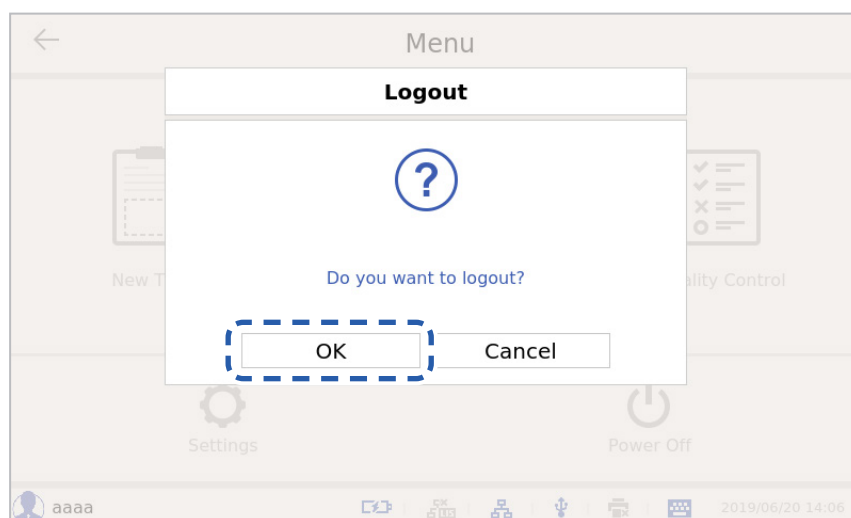
1. Press the **[Power Off]** button.



2. Press the **[Log Out]** button.



3. Press the **[OK]** button.

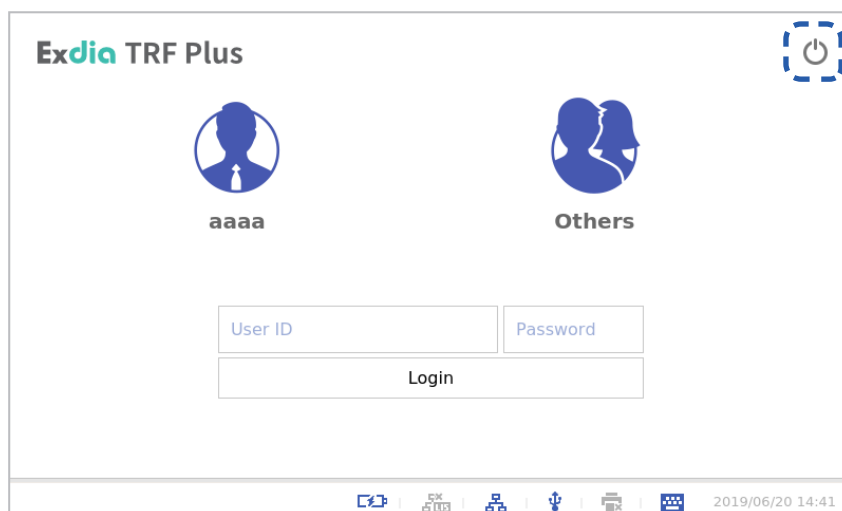


◆ Power Off

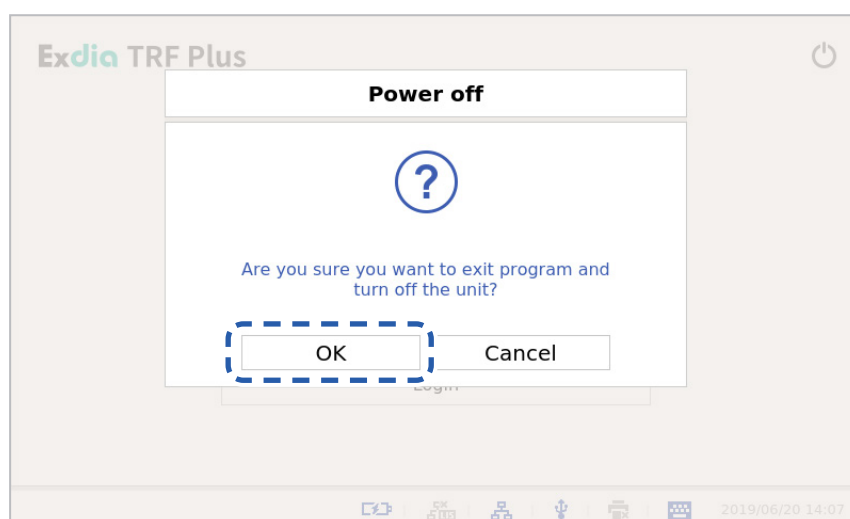
Turn the power off either through the login screen or the menu screen.

■ Power off from the Login Screen

1. Press the  button on the login screen.

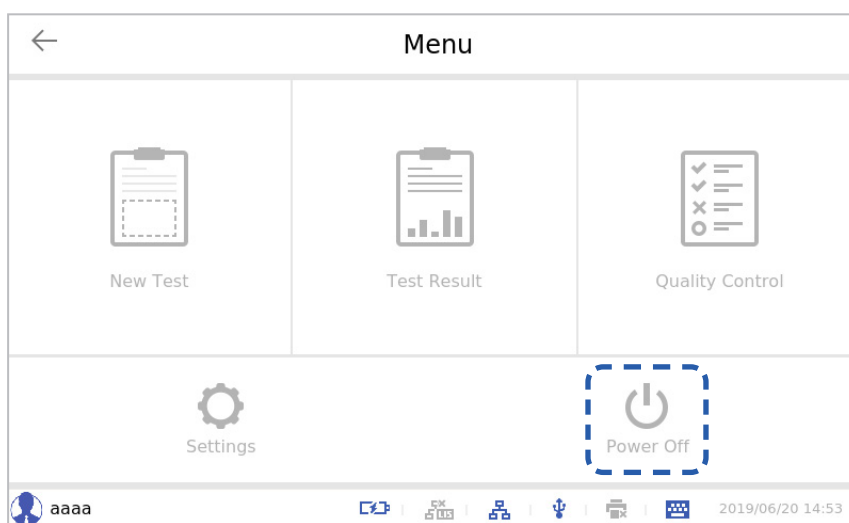


2. The **[Power off]** screen appears. Press the **[OK]** button.
 - When you press the **[Cancel]** button, power off will be canceled.

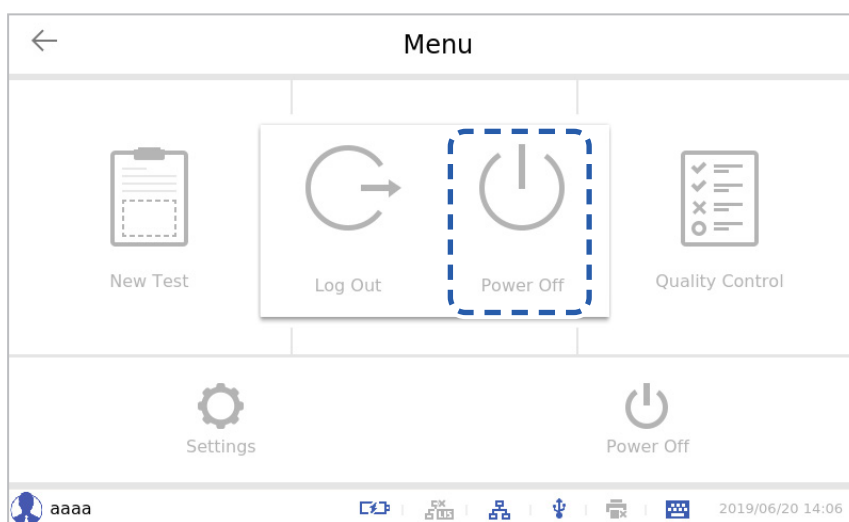


■ Power off on the Menu Screen

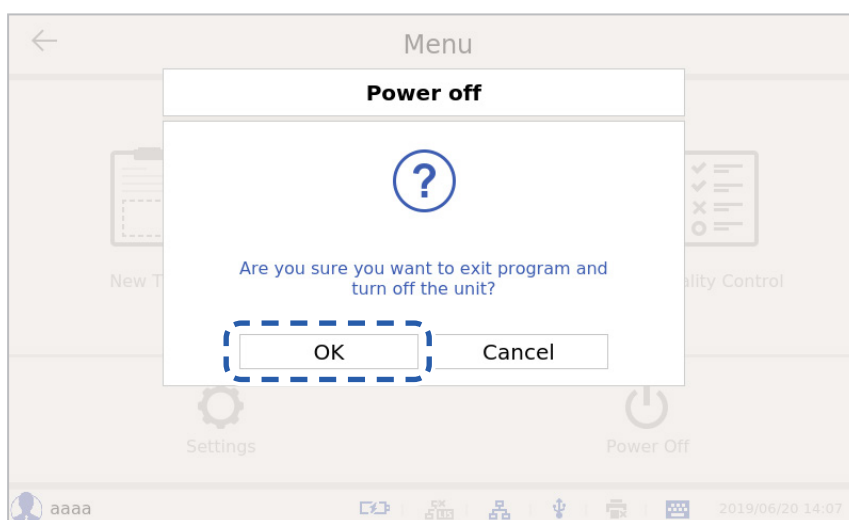
1. Press the **[Power Off]** button.



2. Press the **[Power Off]** button.



3. Press the **[OK]** button.



Testing

Carry out the test according to the following method. For the detailed method, refer to the user manual included in the cassette box.

◆ Register a QR Card


Before carrying out the new test, a QR card should be registered.



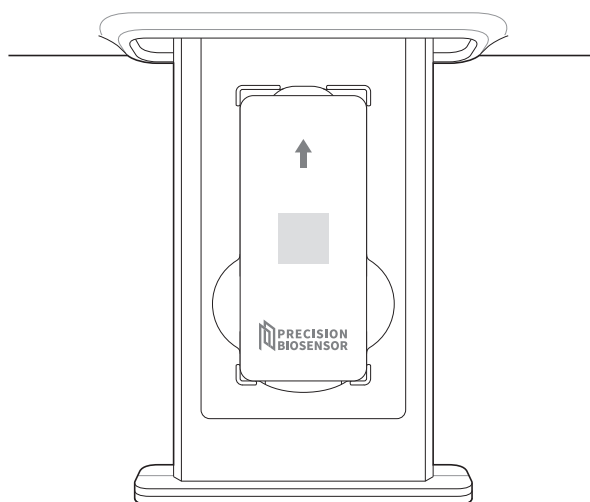
Caution

When testing a new Exdia cassette lot, register the QR card included in the cassette box.

1. Enter ID and the password and press the **[Login]** button.



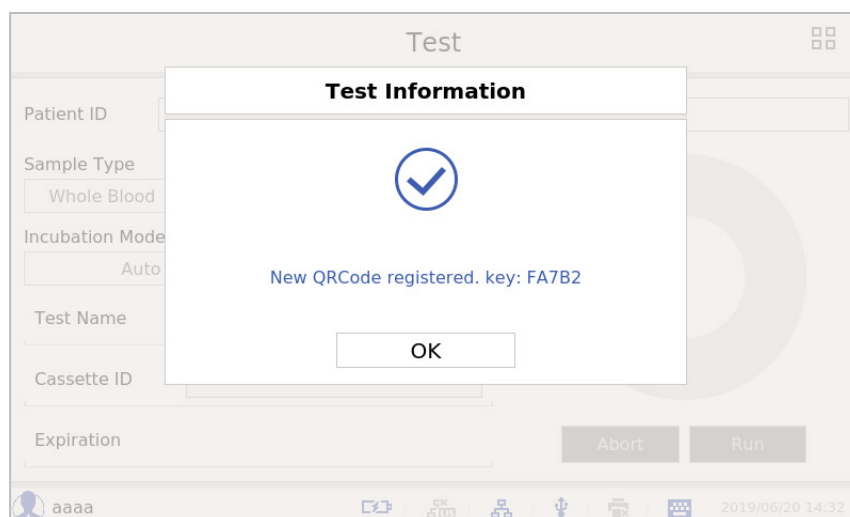
2. Insert the QR card into the cassette slot.

**Note**

Insert the QR card with the label and information facing up.

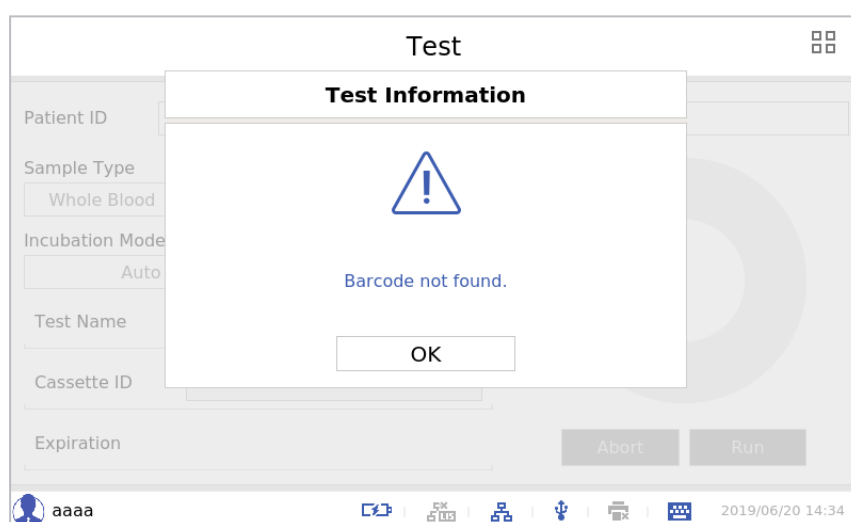
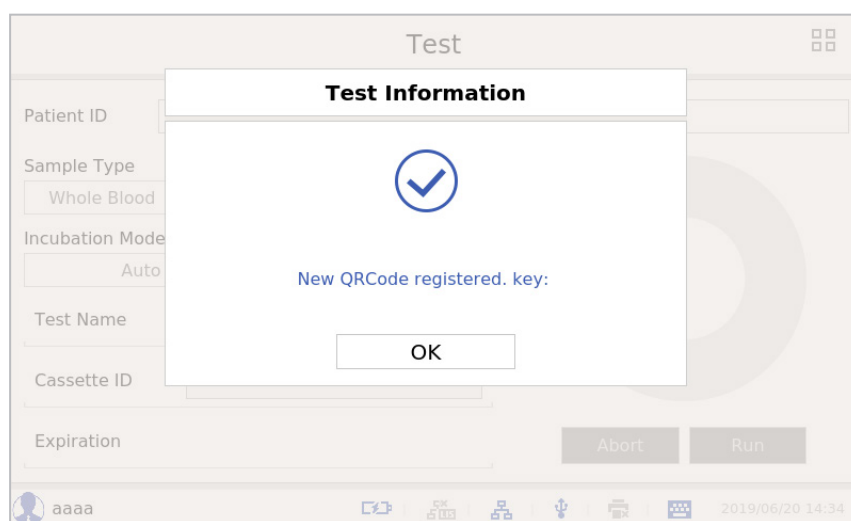
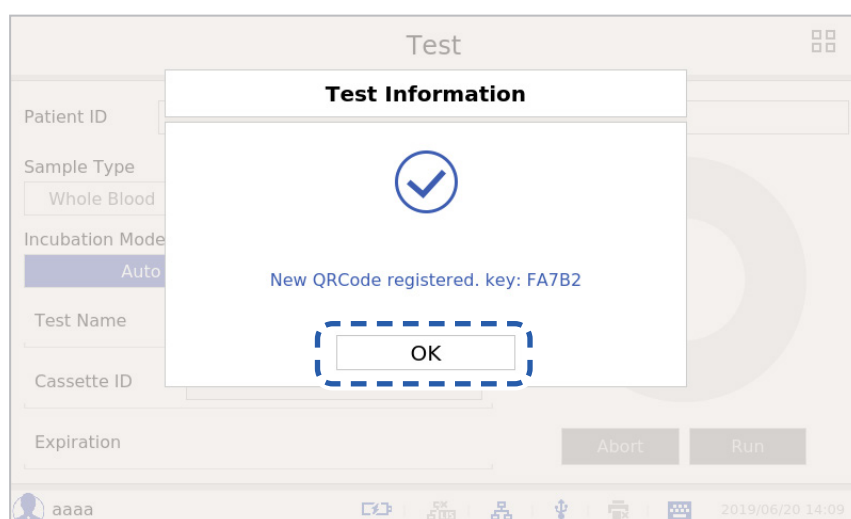
Insert the QR card and close the cassette slot to automatically read the QR card.

If the QR card is successfully read, the New QR Code registered message is displayed.



**Note**

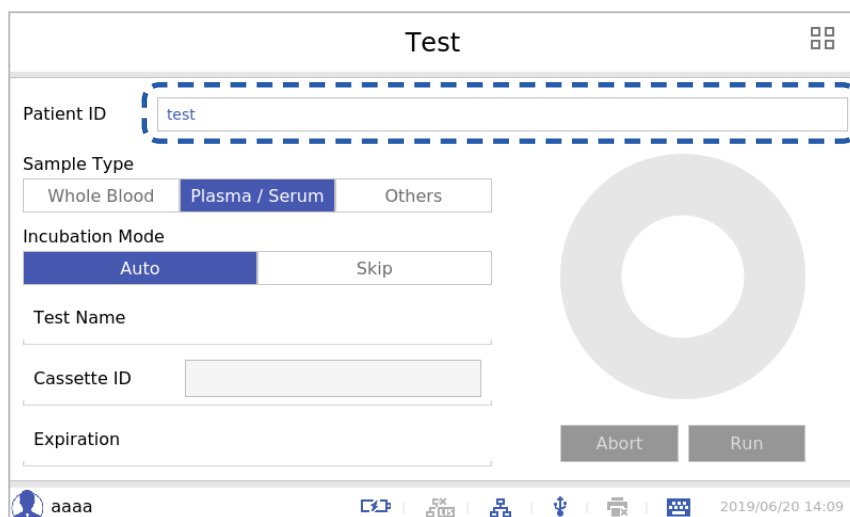
When the screen shown below appears, contact the Customer Support Team (support@precision-bio.com) and receive a new test file.

**3.** Press the **[OK]** button.

◆ Testing

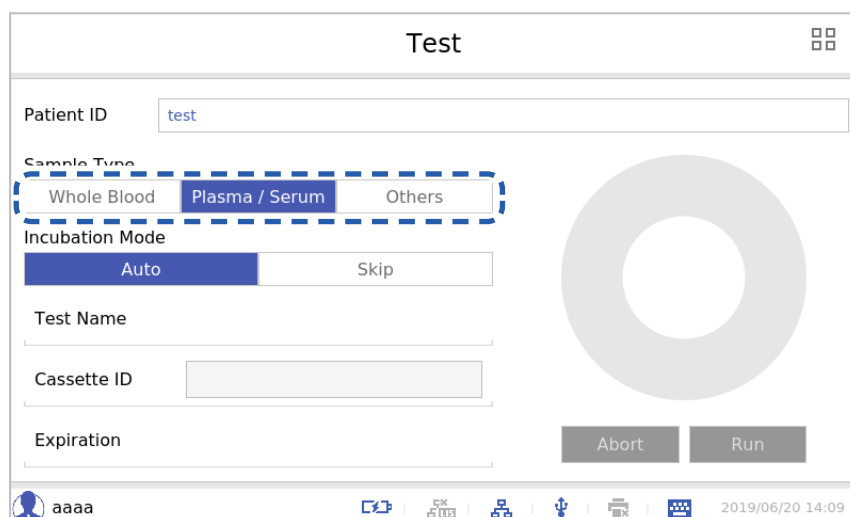
Carry out the Test according to the following method.

1. Enter the patient ID.



The screenshot shows the 'Test' interface. The 'Patient ID' field is highlighted with a dashed blue box and contains the text 'test'. Below it, the 'Sample Type' section has three buttons: 'Whole Blood', 'Plasma / Serum' (which is selected), and 'Others'. The 'Incubation Mode' section has two buttons: 'Auto' (selected) and 'Skip'. The 'Test Name' field is empty. The 'Cassette ID' field is empty. The 'Expiration' field is empty. On the right side, there is a large circular graphic. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows a user icon, the text 'aaaa', and a date/time stamp '2019/06/20 14:09'.

2. Select the sample type.



The screenshot shows the 'Test' interface. The 'Sample Type' section has three buttons: 'Whole Blood', 'Plasma / Serum' (which is selected), and 'Others'. The 'Incubation Mode' section has two buttons: 'Auto' (selected) and 'Skip'. The 'Test Name' field is empty. The 'Cassette ID' field is empty. The 'Expiration' field is empty. On the right side, there is a large circular graphic. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows a user icon, the text 'aaaa', and a date/time stamp '2019/06/20 14:09'.

- Whole Blood
- Plasma/Serum
- Others: influenza A+B/iFOB)



The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer's requirements.

**Note**

Select the correct sample type. If you select an incorrect sample type, the analyzer may display incorrect data.

**Note**

Change the incubation setting from **Settings ► Advanced ► Incubation Mode**.

3. Check the incubation mode.

The screenshot shows the 'Test' screen with the following fields and options:

- Patient ID:** test
- Sample Type:** Whole Blood, **Plasma / Serum**, Others
- Incubation Mode:** **Auto** (highlighted with a dashed blue box), Skip
- Test Name:** (empty)
- Cassette ID:** (empty)
- Expiration:** (empty)
- Buttons:** Abort, Run
- Footer:** User: aaaa, Date/Time: 2019/06/20 14:09

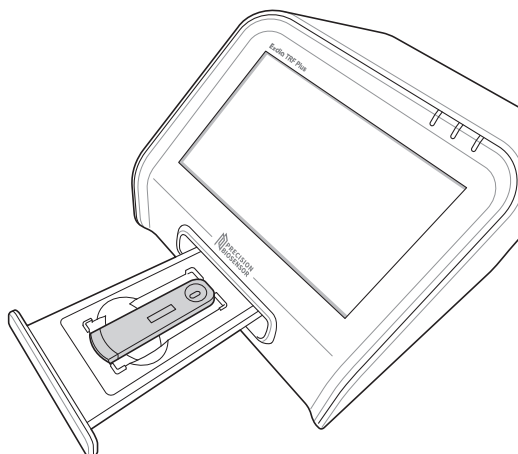
- Auto: The test begins after the incubation in the analyzer is carried out according to the set time.

The screenshot shows the 'Test' screen with the following fields and options:

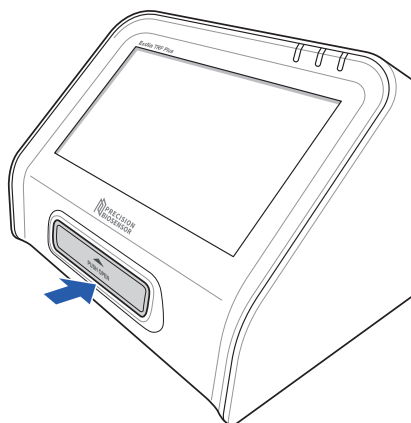
- Patient ID:** test
- Sample Type:** **Whole Blood**, Plasma / Serum, Others
- Incubation Mode:** **Auto** (highlighted with a dashed blue box), Skip
- Test Name:** Exdia 3-in-1
- Cassette ID:** FC7B1-00204
- Expiration:** 18-02
- Buttons:** Abort, Run
- Progress Indicator:** A circular progress indicator showing a small blue segment and the time 00:14:20.
- Footer:** User: aaaa, Date/Time: 2019/06/20 11:10

- Skip: The test begins immediately without incubation in the analyzer.

4. Open the cassette slot and insert the cassette.



5. Insert the sample and close the cassette slot.

**Note**

- For the test method, refer to the user manual for the Exdia cassette.
- The cassette ID and the test name are displayed automatically according to the cassette and barcode information.
- If the lot information of the cassette is registered, it will be displayed in the format of the selected expiration date of the relevant lot.

6. Press the **[Run]** button to start scanning.

The screenshot shows the 'Test' screen with the following details:

- Patient ID:** test
- Sample Type:** Whole Blood (selected), Plasma / Serum, Others
- Incubation Mode:** Auto, Skip (selected)
- Test Name:** Exdia 3-in-1
- Cassette ID:** FC7B1-00204
- Expiration:** 18-02
- Status:** Scanning... (indicated by a donut chart)
- Buttons:** Abort, Run (highlighted with a dashed blue box)



Note

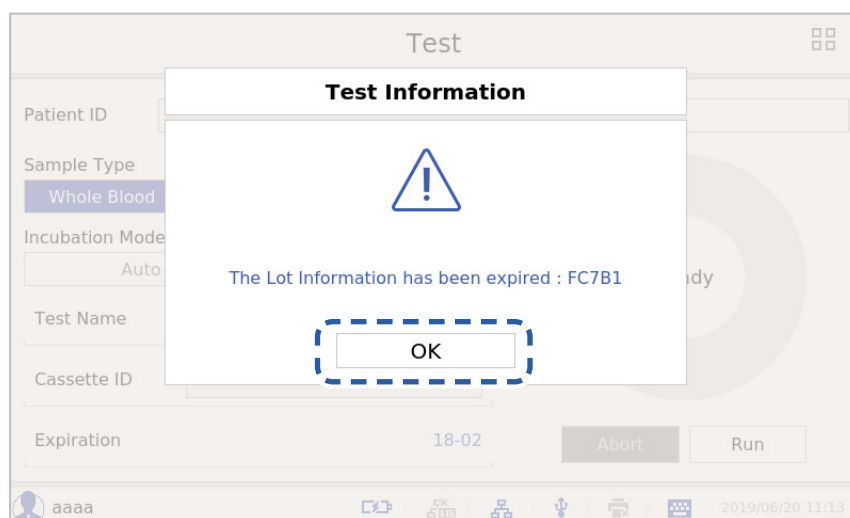
- Abort a test by pressing the **[Abort]** button while the test is being carried out.
- Cassettes interrupted during the test cannot be reused.


The screenshot shows the 'Test' screen with the following details:

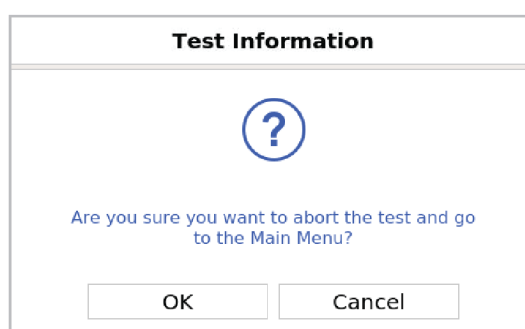
- Patient ID:** test
- Sample Type:** Whole Blood (selected), Plasma / Serum, Others
- Incubation Mode:** Auto, Skip (selected)
- Test Name:** Exdia 3-in-1
- Cassette ID:** FC7B1-00204
- Expiration:** 18-02
- Status:** Aborted.. (indicated by a donut chart)
- Buttons:** Abort (highlighted with a dashed blue box), Run

- When the cassette is expired, the following message will be displayed and the test will not proceed.

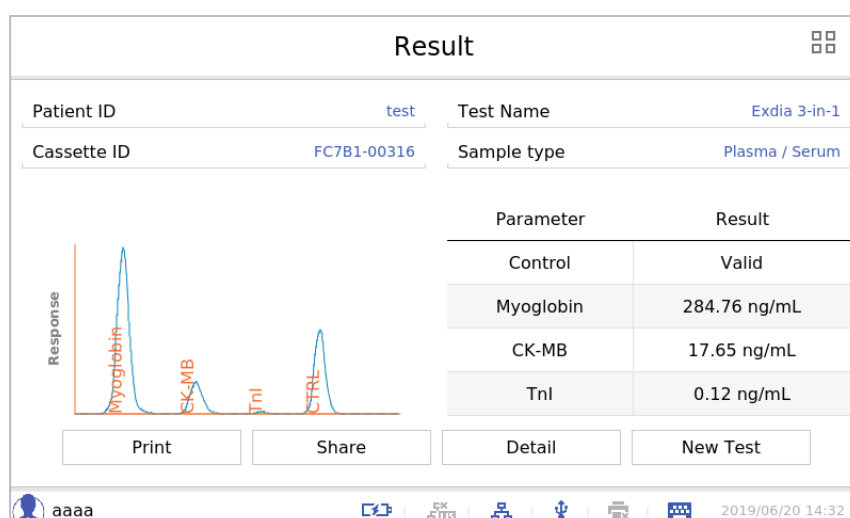
7. Press the **[OK]** button.



8. Press the  button while a test is being carried out, the following message will be displayed. Press the **[OK]** button, the recognized cassette information will disappear, and the screen will move to the Menu screen. To cancel a test, press the **[Cancel]** button.

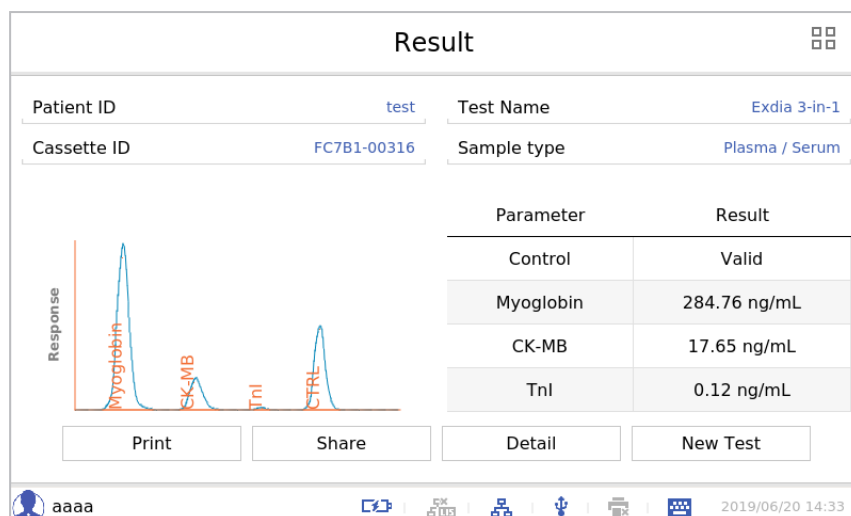


9. After running a test, the Result screen will be displayed.



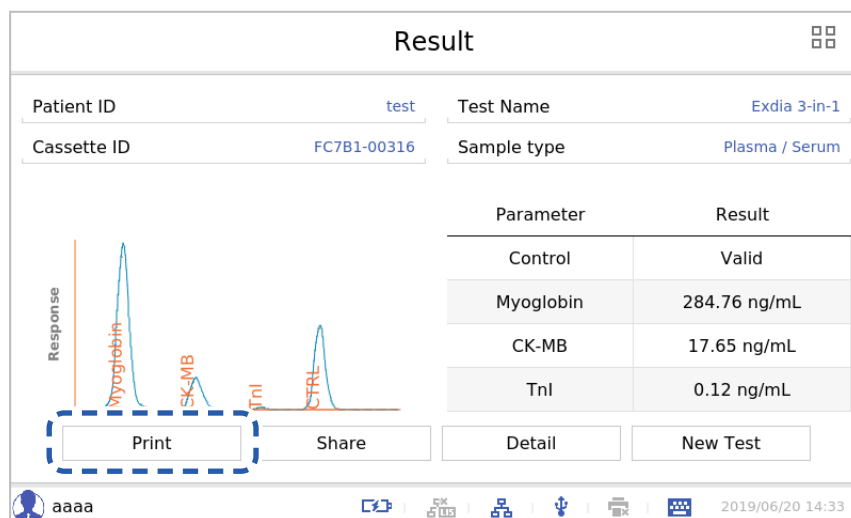
Result

Check the result of a test.



Print

Press the **[Print]** button to print the test result to the printer connected to the analyzer.



After completing the printing, press the **[OK]** button.

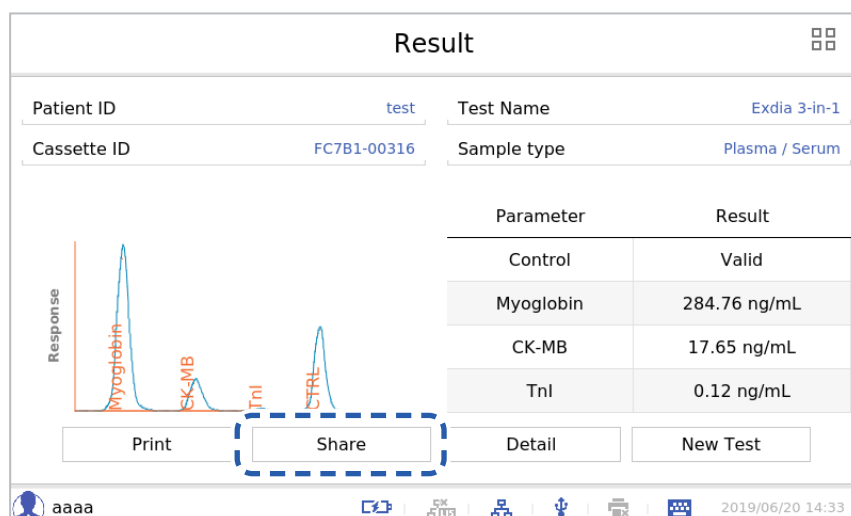


Note

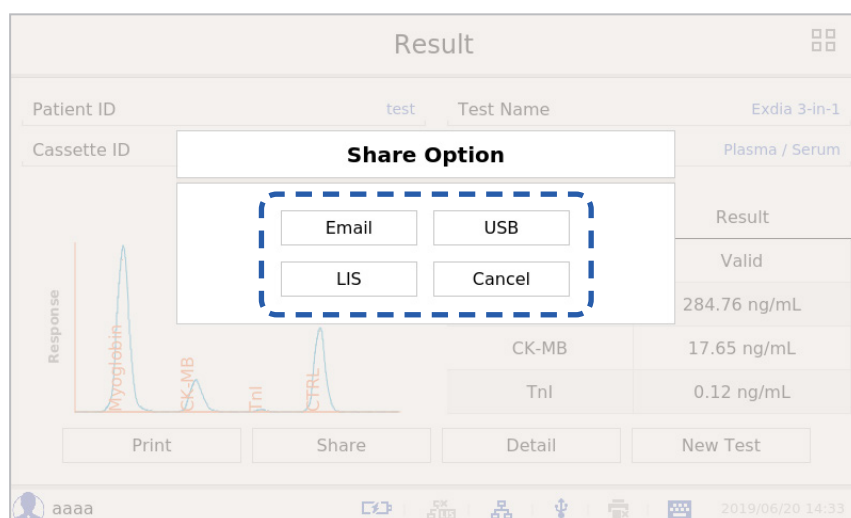
If printing does not happen, change the printer setting by referring to **“Printer/Sound”** on page 74.

Share

Press the **[Share]** button to share the test result via Email, USB memory, and LIS.



Select the method to share test result.



Email

Convert test result to PDF format and email the PDF. Enter the email address and press the **[Send]** button.

- Recipient's Email Address: Recipient's Email address
- Sender's Email Address: Sender's Email address
- Password: Password
- Save: Save the password
- SMTP Server: SMTP server of sender
- SMTP Port: SMTP port of sender



Caution

Check network connection status.

If a network connection is not established, refer to **"Network/LIS"** on page 71.

■ USB

After converting a test result to PDF format, save it to a USB memory. Enter the file name and press the **[OK]** button.

Result

Patient ID: test Test Name: Exdia 3-in-1

Cassette ID: Plasma / Serum

Export as PDF

Export Path: /Your USB Drive/ResultPDF

File Name: 20190620-143220_test

Ok Cancel

Print Share Detail New Test

aaaa 2019/06/20 14:35

Result
Valid
284.76 ng/mL
17.65 ng/mL
0.12 ng/mL



Note

Connect a USB memory to the analyzer.

■ LIS

Send the test result to a LIS server saved in settings. For setting the LIS server, refer to 'Network/LIS'.

Settings

← i

Date / Time / Language Set IP Address Apply

Network / LIS Auto Manual

Printer / Sound Address: 192.168.0.22 Sub. Mask: 255.255.255.0

Operators Gateway: 192.168.0.1

Advanced LIS Connect

Service Device ID: Test Server: 192.168.0.147

Quality Control Port: 8282 Mode / Notice: HL7 [Checkmark]

aaaa 2019/06/20 14:36

Detail

Press the **[Detail]** button to see the details of the test results.

Detail Information		
Parameter	Result	Ref.Range
Control	Valid	-
Myoglobin	274.08 ng/mL	< 0.09
CK-MB	17.14 ng/mL	< 5
TnI	0.06 ng/mL	< 0.06
OK		

New Test

Press the **[New Test]** button to run a new test.



The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer’s requirements.

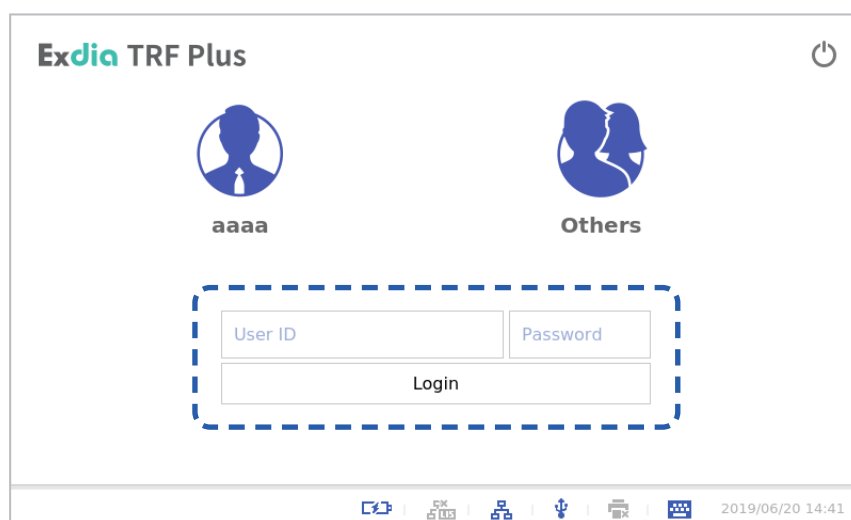
Test Results

Test results can be confirmed separately in test results and external QC results.

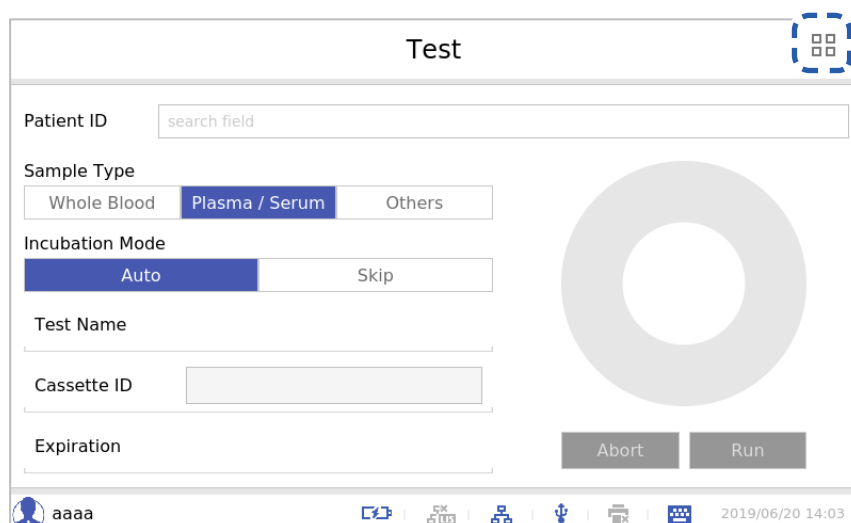
Results

Test results stored on the Exdia TRF Plus can be viewed, deleted, shared and printed.

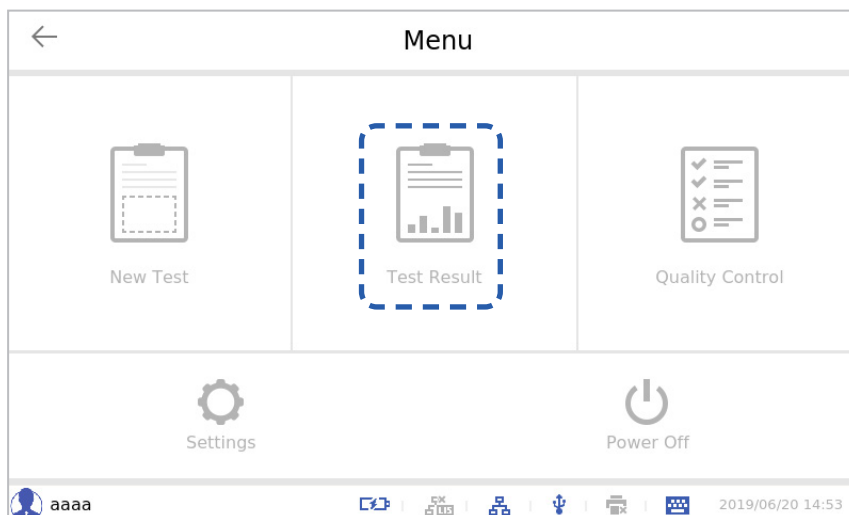
1. Enter ID and the password and press the **[Login]** button.



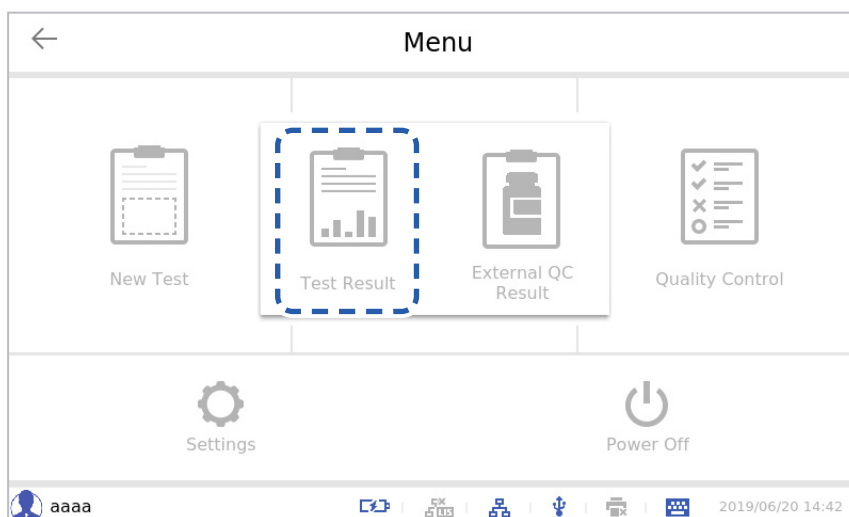
2. Press the  button.



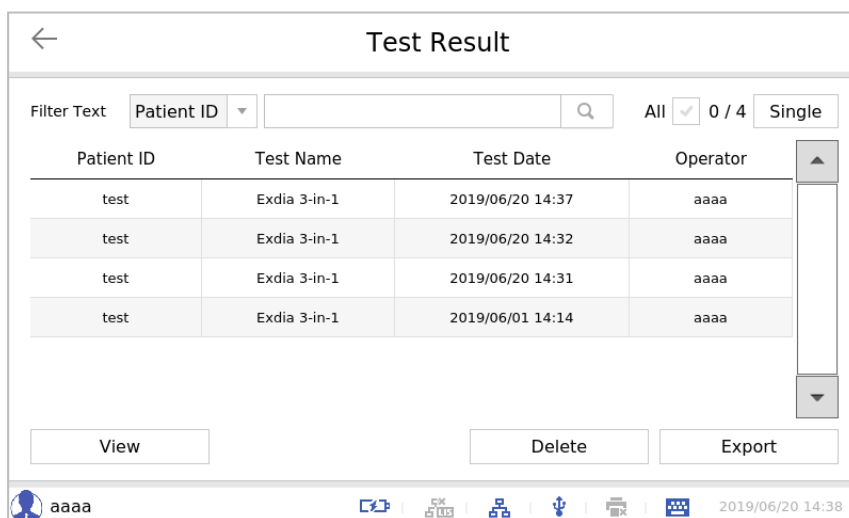
3. Press the **[Test Result]** button.



4. Press the **[Test Result]** button.



The 'Test Result' screen will appear.



- Only one result can be selected in Single mode.

← **Test Result**

Filter Text **Patient ID** All ☒ 1 / 4 **Single**

Patient ID	Test Name	Test Date	Operator
test	Exdia 3-in-1	2019/06/20 14:37	aaaa
test	Exdia 3-in-1	2019/06/20 14:32	aaaa
test	Exdia 3-in-1	2019/06/20 14:31	aaaa
test	Exdia 3-in-1	2019/06/01 14:14	aaaa

aaaa 2019/06/20 14:39

- More than one result can be selected in Select mode

← **Test Result**

Filter Text **Patient ID** All ☒ 4 / 4 **Select**

Patient ID	Test Name	Test Date	Operator
test	Exdia 3-in-1	2019/06/20 14:37	aaaa
test	Exdia 3-in-1	2019/06/20 14:32	aaaa
test	Exdia 3-in-1	2019/06/20 14:31	aaaa
test	Exdia 3-in-1	2019/06/01 14:14	aaaa

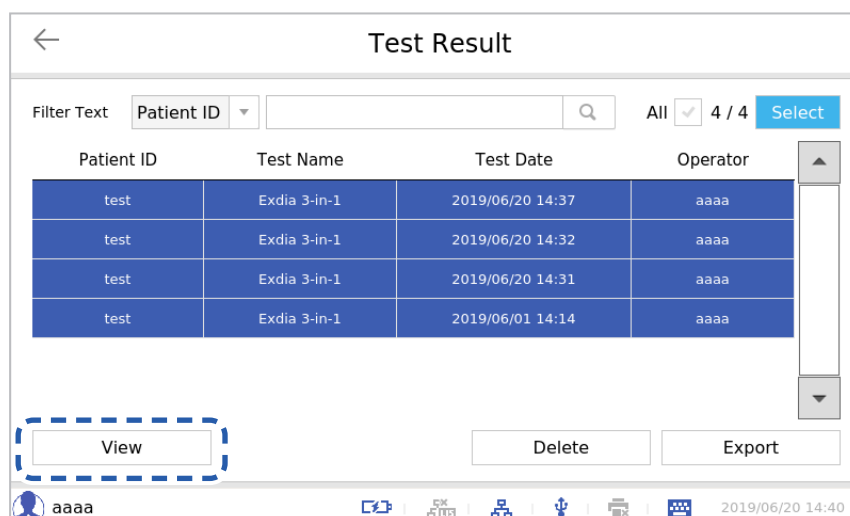
aaaa 2019/06/20 14:39



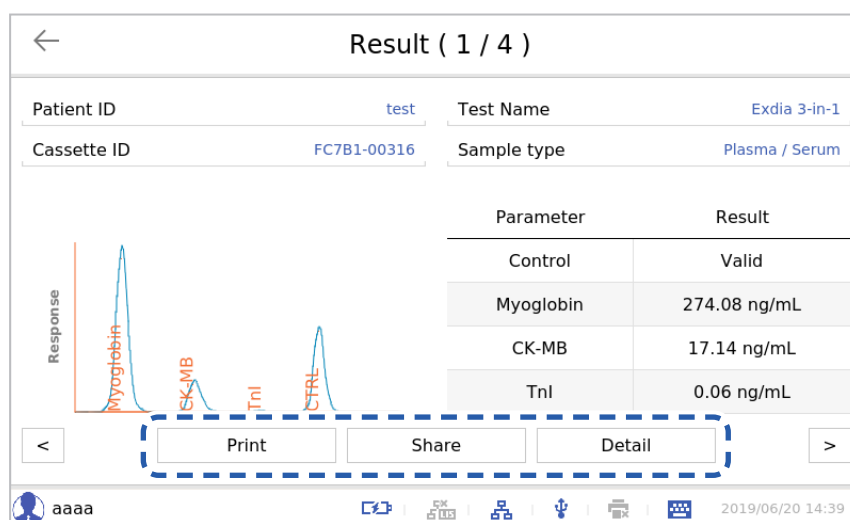
The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer's requirements.

View

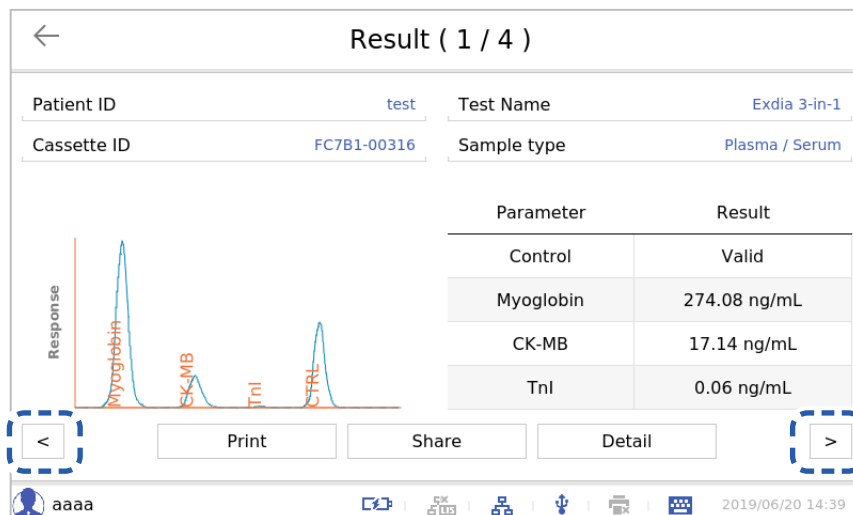
- View the details of a test result by selecting the test result and clicking the **[View]** button.




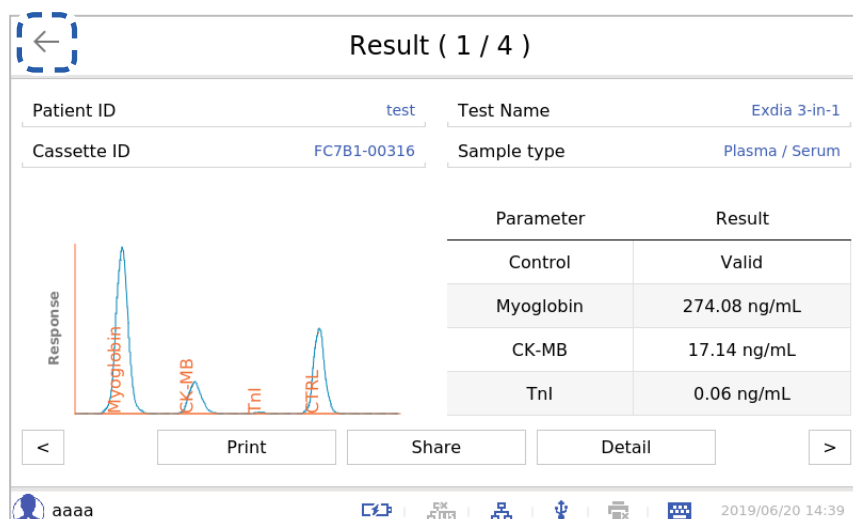
- Press the **[Print]** button to print the test results, press the **[Share]** button to share the test results and press the **[Detail]** button to check the details of the test results. Please see **"Result"** on page 32 for more information.



- View other selected test results using the  and  buttons on the left and right.

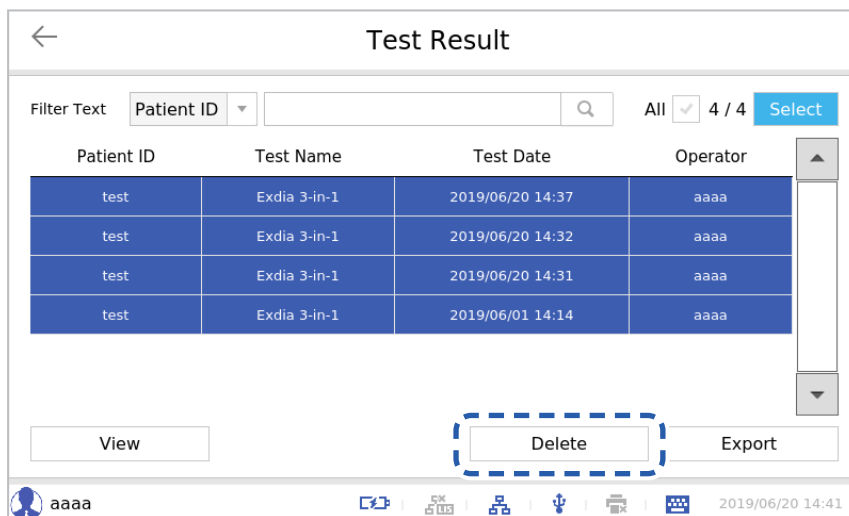


- Press the  button to return to the previous screen.

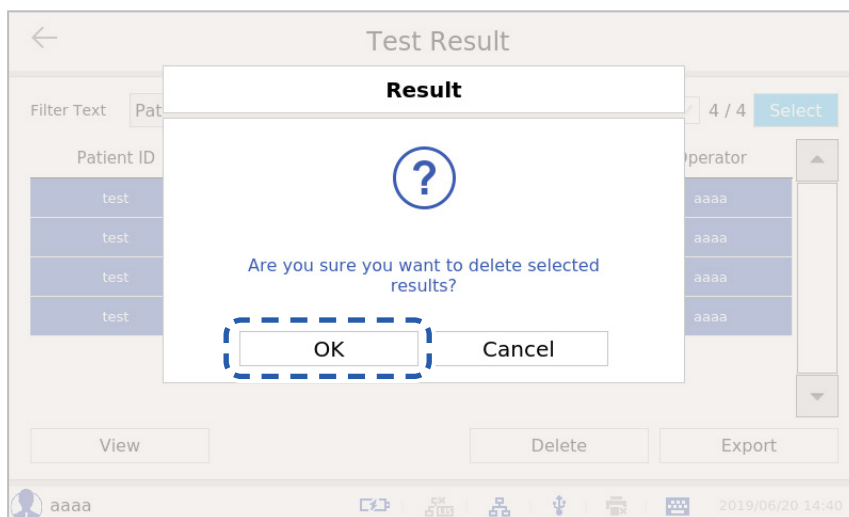


Delete

Select a test result and press the **[Delete]** button to delete the test result.

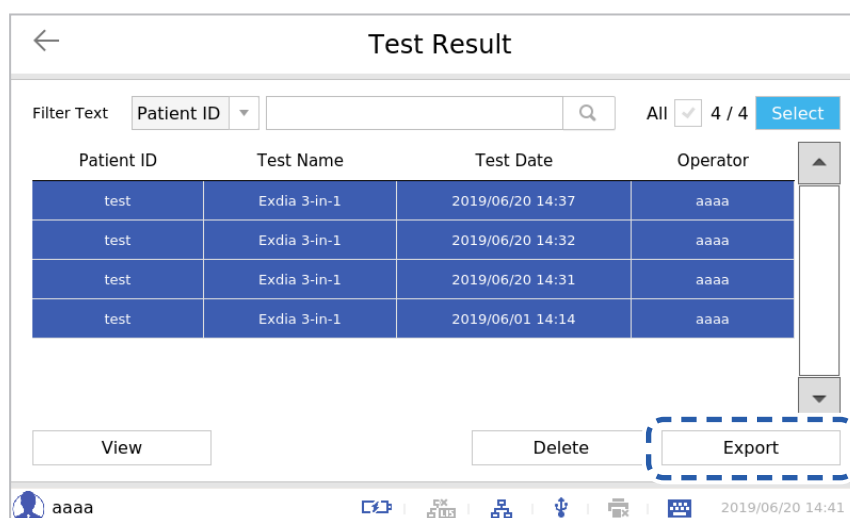


When the 'Result' window appears, press the **[OK]** button.

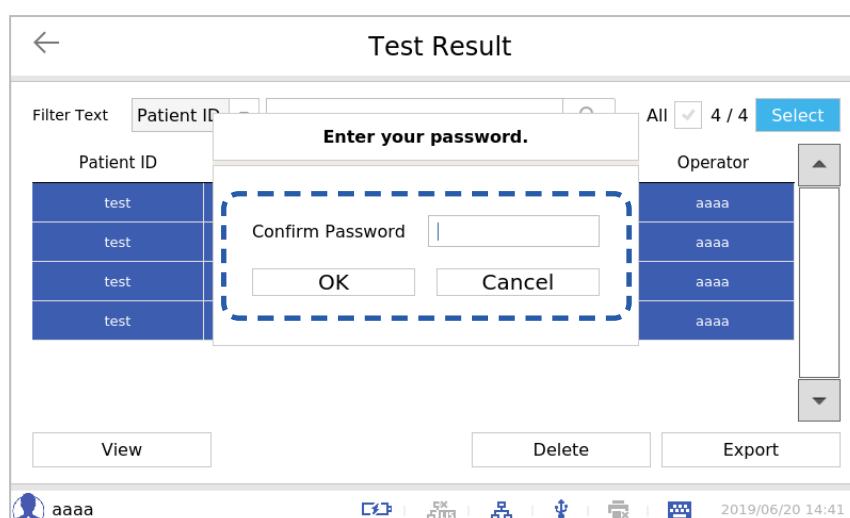


Export

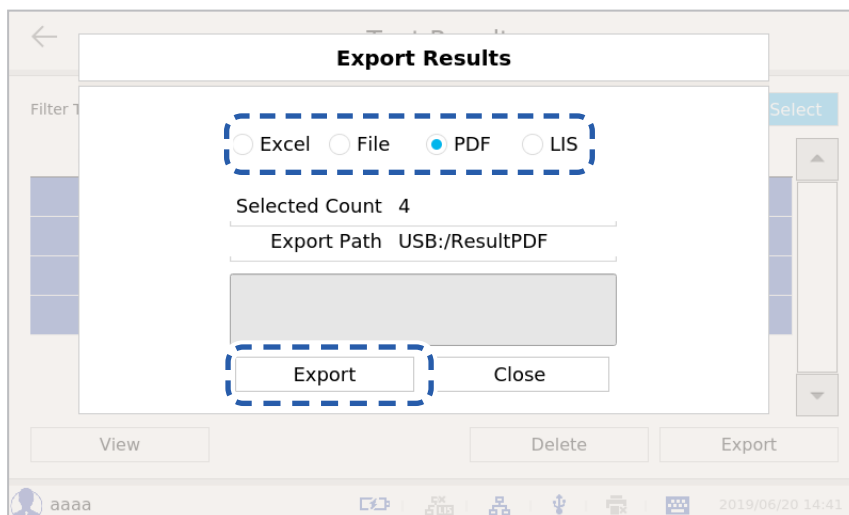
Save a test result to a USB memory in a different file format or send it to the LIS server by selecting the test result and pressing the **[Export]** button.



Type your password in the Enter User Password window.



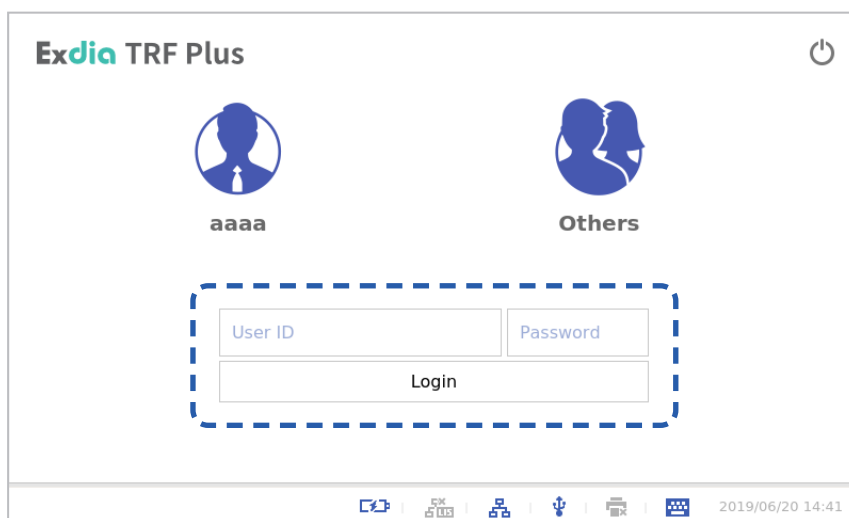
Connect the USB memory to the analyzer, select storage media and press the **[Export]** button.

**Note**

- If you select 'Excel', the test result will be saved as a file with the extension '.xls'.
- If you select 'File', the test result will be saved as a file with the extension '.sam'.
- If you select 'PDF', the test result will be saved as a file with the extension '.pdf'.
- A USB memory is not necessary for sending the test result to the LIS server.

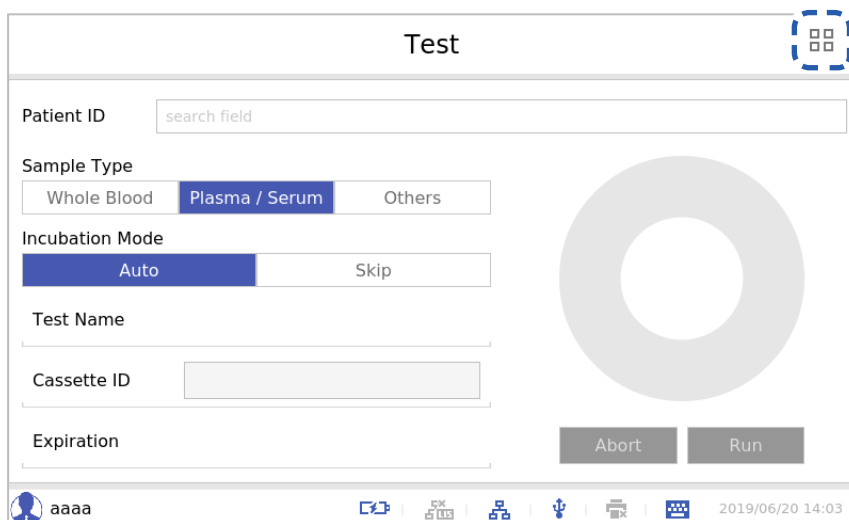
◆ External QC Result

1. Press the **[Login]** button after enter ID and the password.



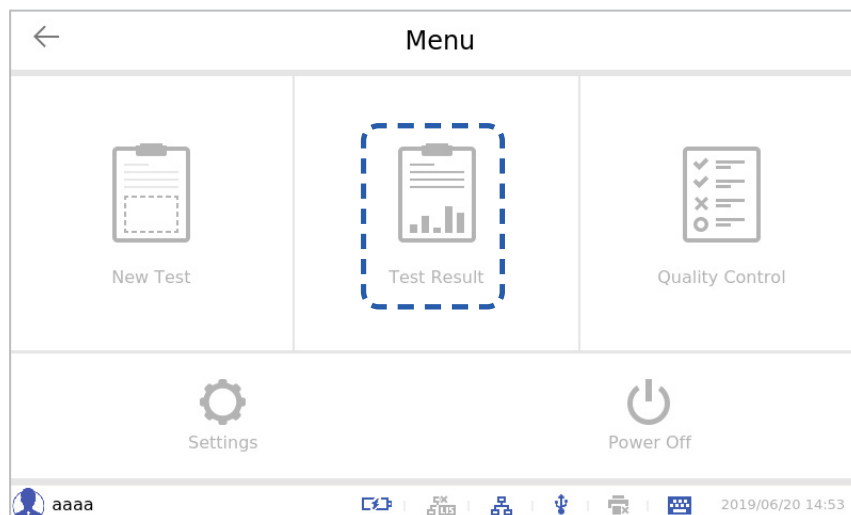
The login screen for the Exdia TRF Plus device. It features the device name 'Exdia TRF Plus' at the top left and a power icon at the top right. Below the name are two user selection icons: a single person icon labeled 'aaaa' and a group of people icon labeled 'Others'. In the center, there is a dashed blue box containing a login form with fields for 'User ID' and 'Password', and a 'Login' button. At the bottom, there is a status bar with various icons and the date/time '2019/06/20 14:41'.

2. Press the  button.

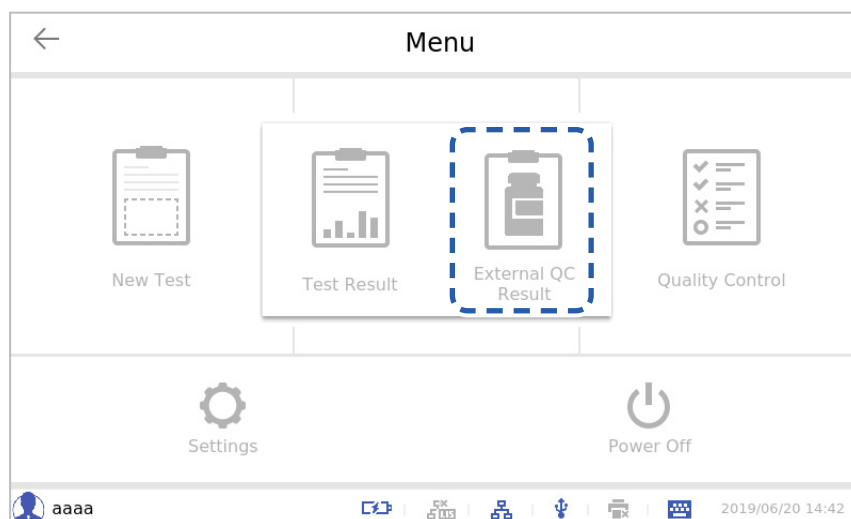


The 'Test' screen for the Exdia TRF Plus device. It has a title bar with the word 'Test' and a menu icon (dashed blue box with four squares) in the top right corner. The main area contains several input fields and buttons: 'Patient ID' with a search field, 'Sample Type' with buttons for 'Whole Blood', 'Plasma / Serum' (selected), and 'Others', 'Incubation Mode' with buttons for 'Auto' (selected) and 'Skip', 'Test Name' with a text input field, 'Cassette ID' with a text input field, and 'Expiration' with a text input field. On the right side, there is a large circular progress indicator. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows the user 'aaaa', various icons, and the date/time '2019/06/20 14:03'.

3. Press the **[Test Result]** button.



4. Press the **[External QC Result]** button.



Click the "From" or "To" input column in the 'External Quality Control Result' window and select the date you wish to search.







← External Quality Control Result

Test Name Test Lot From To

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 0 / 13 Single

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

View Graph Export Results Export Samples Delete

aaaa       2019/06/20 14:42

Search Date From


Prev Month Year Month Next Month

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

OK Cancel

Change the search conditions as needed and check the result by pressing the  button.


← External Quality Control Result

Test Name Test Lot From To 

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☐ 0 / 13 Single


Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

View Graph Export Results Export Samples Delete

aaaa  2019/06/20 14:42

- Only one result can be selected in Single mode.


← External Quality Control Result

Test Name Test Lot From To 

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 1 / 13 Single


Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

View Graph Export Results Export Samples Delete

aaaa  2019/06/20 14:43

- More than one result can be selected in Select mode.


← External Quality Control Result

Test Name Test Lot From To 

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 3 / 13 Select

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

View Graph Export Results Export Samples Delete

aaaa  2019/06/20 14:43

View

View the details of a QC result by selecting the QC result and clicking the **[View]** button.

← External Quality Control Result

Test Name Test Lot From To

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 13 / 13

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

aaaa 2019/06/20 14:43

- View other selected QC results using the and buttons on the left and right.

← External Quality Control Review (1 / 13)

QC Material Level

Brand Lot #

Test Name Cassette ID

Response

Parameter	Result	Pass/Fail
Control	Valid	
Myoglobin	276.48 ng/mL	Pass
CK-MB	16.61 ng/mL	Pass
TnI	0.10 ng/mL	Pass

aaaa 2019/06/20 14:43

Graph

View a QC result as a graph by selecting the QC result and clicking the **[Graph]** button.

← External Quality Control Result

Test Name: Exdia 3-in-1 Test Lot: From: 2019/06/01 To: 2019/06/20

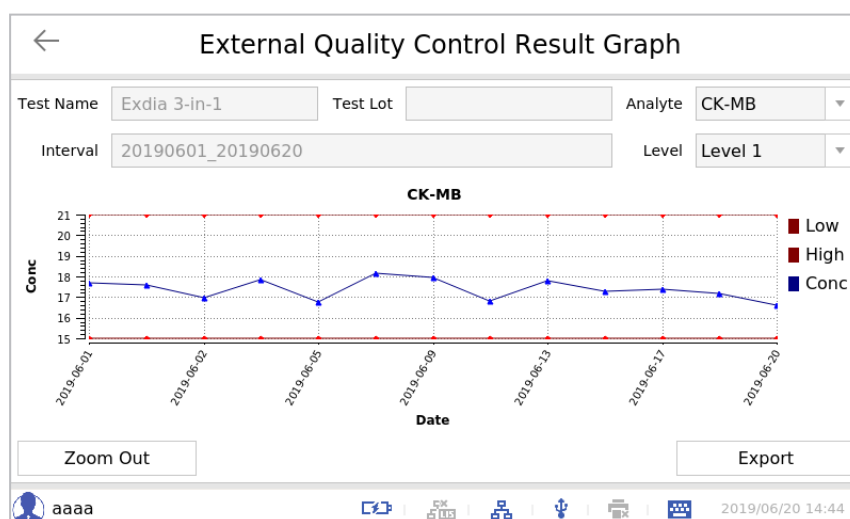
Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 13 / 13 **Select**

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

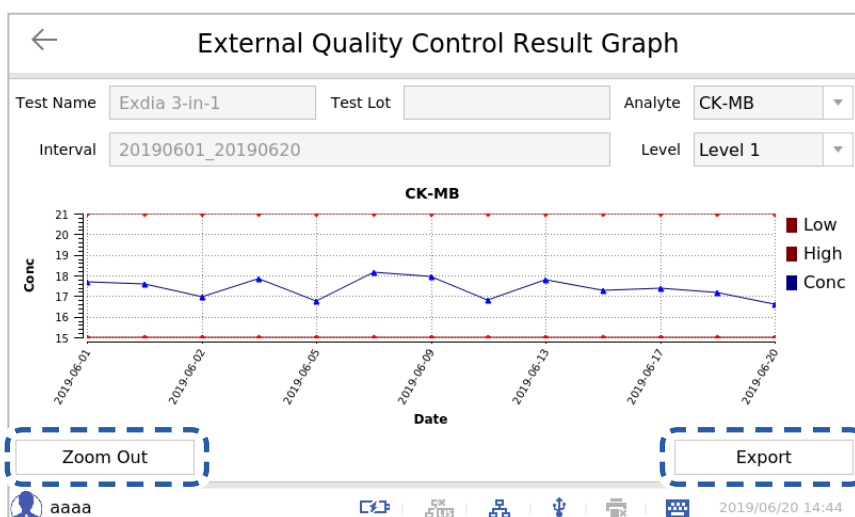
View **Graph** Export Results Export Samples Delete

aaaa 2019/06/20 14:43

- When you change an item, the graph shape will change.



- Adjust the magnification by pressing the **[Zoom Out]** button or save the graph image to a USB memory by pressing the **[Export]** button.



Export Results

Select a QC result by clicking the **[Export Results]** button to save QC result to a USB memory as a file with the extension '.csv'. This file can be checked in Excel.

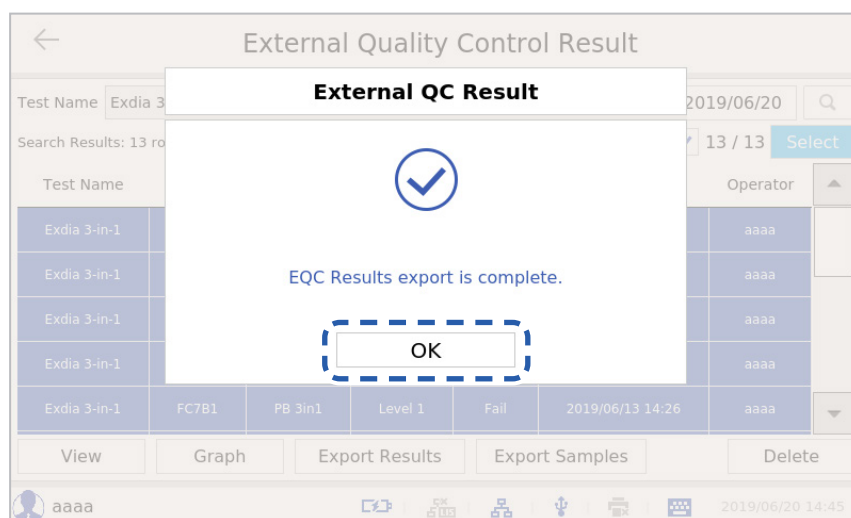
The screenshot shows the 'External Quality Control Result' window. At the top, there are search filters for Test Name (Exdia 3-in-1), Test Lot, and a date range (2019/06/01 to 2019/06/20). Below the filters, it says 'Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20'. A table of results is displayed with columns: Test Name, Test Lot, Material, Level, Result, Test Date, and Operator. The table contains 5 rows of data. Below the table, there are buttons for 'View', 'Graph', 'Export Results' (highlighted with a dashed blue box), 'Export Samples', and 'Delete'. At the bottom, there is a user profile icon labeled 'aaaa' and a timestamp '2019/06/20 14:45'.

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

Enter the password in the Input window.

The screenshot shows the same 'External Quality Control Result' window as before, but with a password input dialog box overlaid. The dialog box has the title 'Enter your password.' and contains a 'Confirm Password' input field, an 'OK' button, and a 'Cancel' button. The 'Export Results' button in the background is still highlighted with a dashed blue box. The rest of the interface, including the search filters, table, and bottom status bar, remains the same.

Press the **[OK]** button in the 'External QC Result' window.



Export Samples

Select a QC result and click the **[Export Samples]** button to save the QC sample file (*.sam) to a USB memory.

External Quality Control Result

Test Name: Exdia 3-in-1 Test Lot: From: 2019/06/01 To: 2019/06/20

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 13 / 13 Select

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

View Graph Export Results **Export Samples** Delete

aaaa 2019/06/20 14:46

Enter the password in the User Password Input window.

External Quality Control Result

Test Name: Exdia 3-in-1 Test Lot: From: 2019/06/01 To: 2019/06/20

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 13 / 13 Select

Enter your password.

Confirm Password

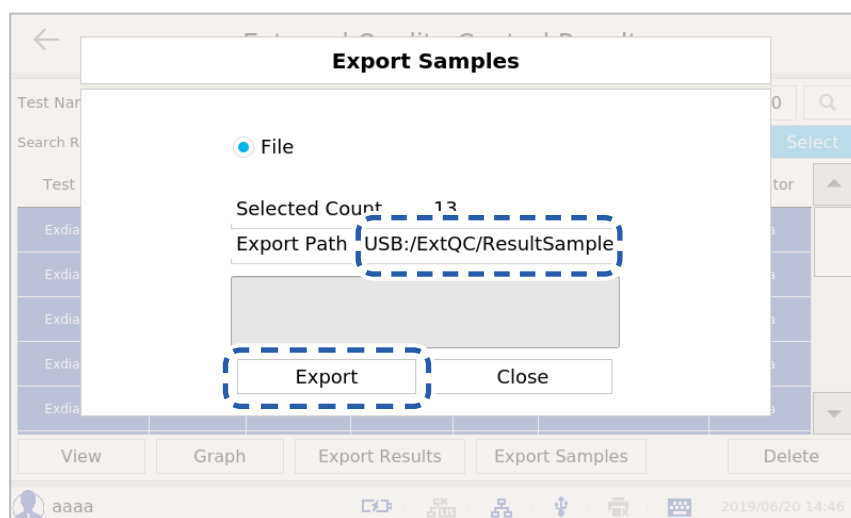
OK Cancel

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

View Graph Export Results **Export Samples** Delete

aaaa 2019/06/20 14:46

The storage path is /ExtQC/ResultSample. Press the **[Export]** button.



Delete

Select the QC result and press the **[Delete]** button to delete a QC result.

External Quality Control Result

Test Name: Exdia 3-in-1 Test Lot: From: 2019/06/01 To: 2019/06/20

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 13 / 13 Select

Test Name	Test Lot	Material	Level	Result	Test Date	Operator
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/20 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/19 14:30	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/17 14:29	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Pass	2019/06/15 14:28	aaaa
Exdia 3-in-1	FC7B1	PB 3in1	Level 1	Fail	2019/06/13 14:26	aaaa

View Graph Export Results Export Samples **Delete**

aaaa 2019/06/20 14:45

Press the **[OK]** button in the 'External QC Result' window

External Quality Control Result

Test Name: Exdia 3-in-1 Test Lot: From: 2019/06/01 To: 2019/06/20

Search Results: 13 rows selected for Exdia 3-in-1, None, 2019/06/01 2019/06/20 All ☒ 13 / 13 Select

Test Name Operator

Exdia 3-in-1 aaaa

Exdia 3-in-1 aaaa

Exdia 3-in-1 aaaa

Exdia 3-in-1 aaaa

Exdia 3-in-1 aaaa

Exdia 3-in-1 FC7B1 PB 3in1 Level 1 Fail 2019/06/13 14:26 aaaa

View Graph Export Results Export Samples Delete

aaaa 2019/06/20 14:46

External QC Result

?

Are you sure you want to delete selected results?

OK Cancel

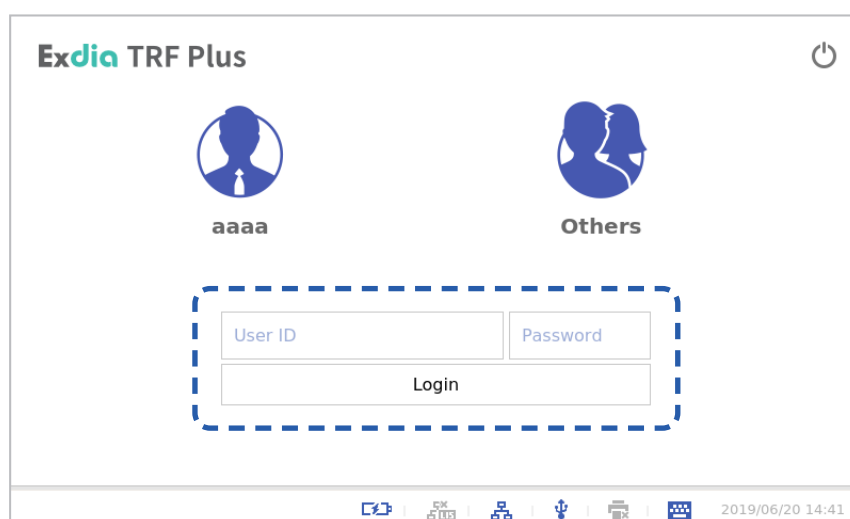
Quality Control

The quality of Exdia TRF Plus analyzer and Exdia cassette are carefully controlled with Internal Quality Control cassette (IQC) and External Quality Control (EQC) material.

Running IQC

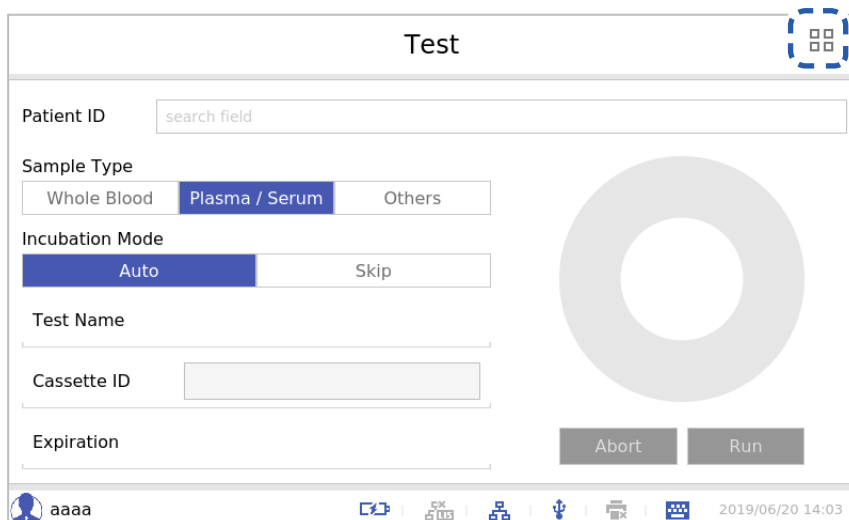
Please check whether the analyzer is operating normally by using the IQC cassette provided with the analyzer.

1. Enter ID and the password and press the **[Login]** button.

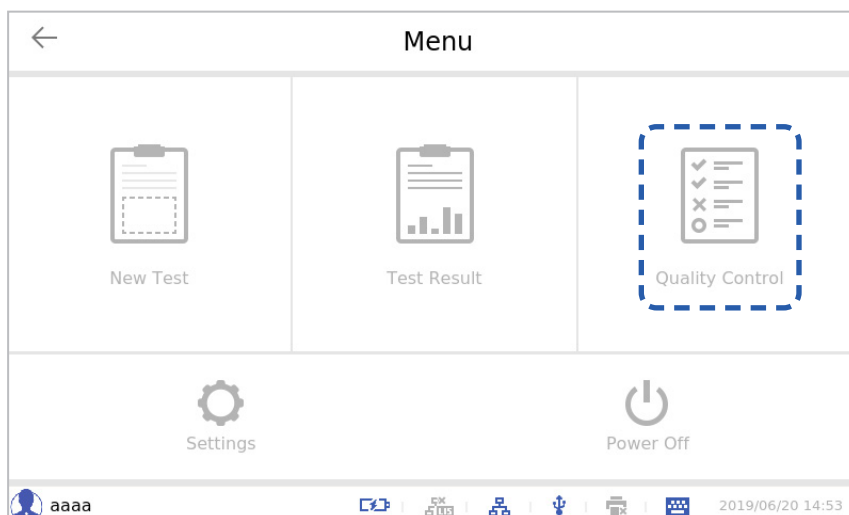


The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer's requirements.

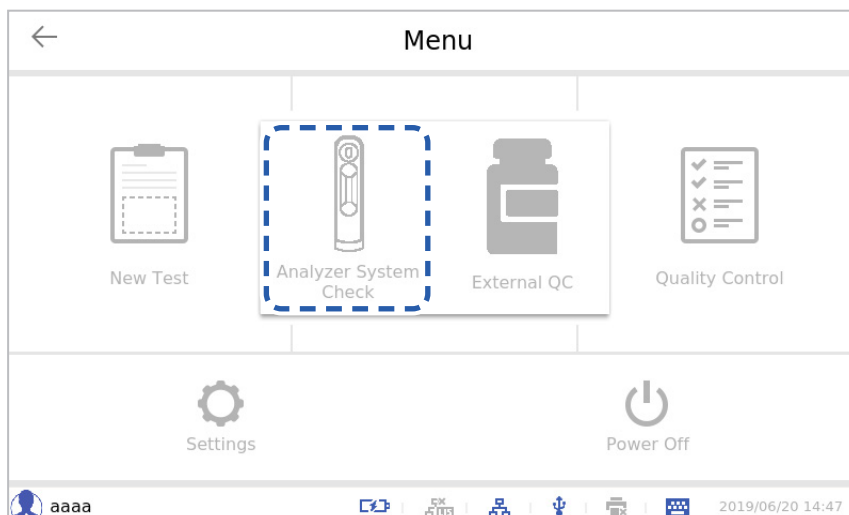
2. Press the  button.



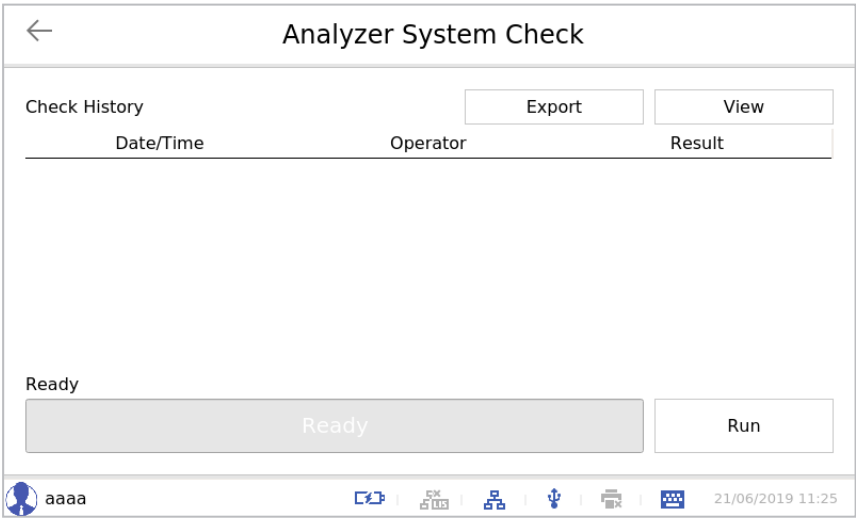
3. Press the [Quality Control] button.



4. Press the [Analyzer System Check] button.



The 'Analyzer System Check' screen will be displayed.





Note

If there is a previous test result, it will be displayed in the Check History table.

←

Analyzer System Check

Check History

Export

View

Date/Time	Operator	Result
2019/06/19 14:30	aaaa	Pass
2019/06/17 14:29	aaaa	Pass
2019/06/15 14:28	aaaa	Pass
2019/06/13 14:27	aaaa	Pass
2019/06/13 14:26	aaaa	Pass
2019/06/11 14:25	aaaa	Pass
2019/06/09 14:23	aaaa	Pass

Ready

Ready

Run

aaaa

2019/06/20 14:48

5. Press the [Run] button.

←

Analyzer System Check

Check History

Export

View

Date/Time	Operator	Result
-----------	----------	--------

Ready

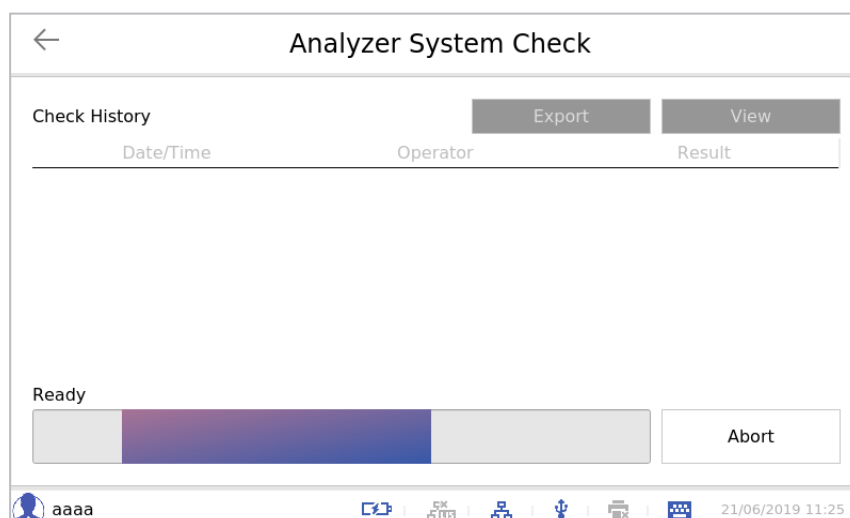
Ready

Run

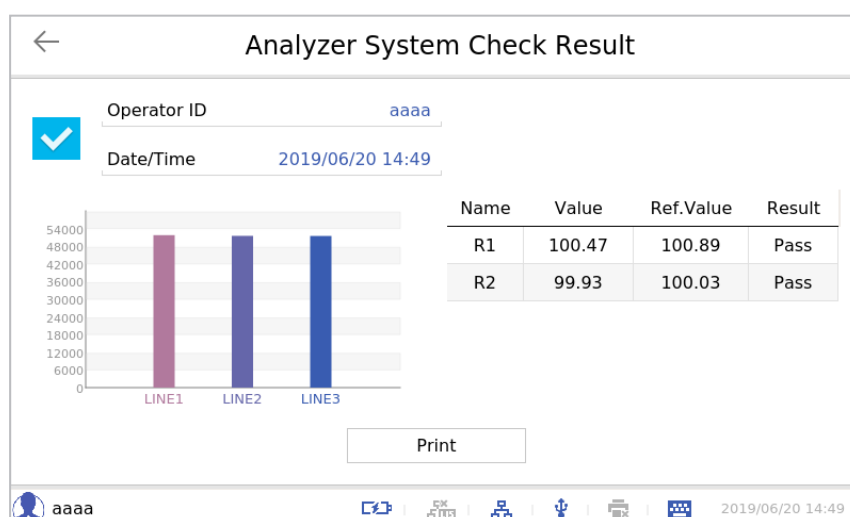
aaaa

21/06/2019 11:25

Scanning will begin. (Scanning may take several minutes.)



After completing the scanning, the result will be displayed.



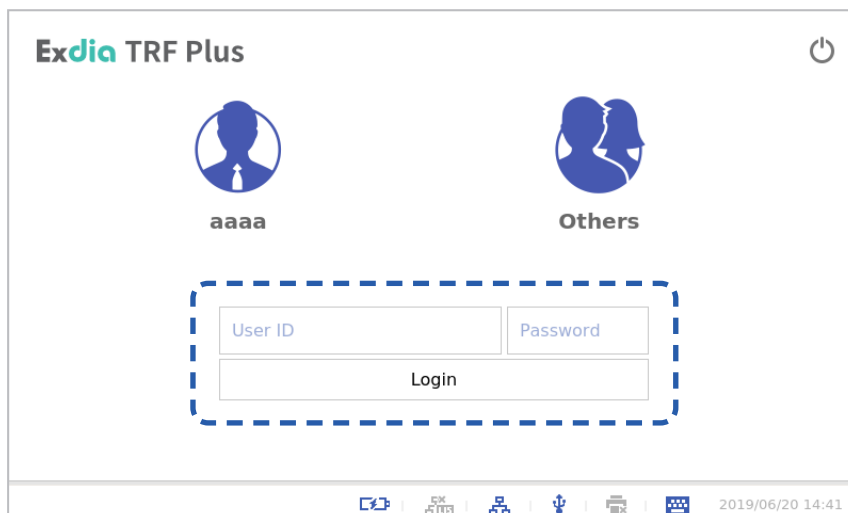
Check the intensity of each test line on a graph. The horizontal axis indicates each test line of the IQC cassette and the vertical axis indicates the measurement value. The table shows each parameter tested by the analyzer.

Item	Description/Value
Name	Name of test standard
Value	Value calculated from the measurement value
Ref.Value	Reference value set by the manufacturer
Result	Validity of the measurement value <ul style="list-style-type: none"> • Pass: The measurement value is within the set range of the reference value. • Fail: The measurement value is out of the set range of the reference value.

◆ Running EQC

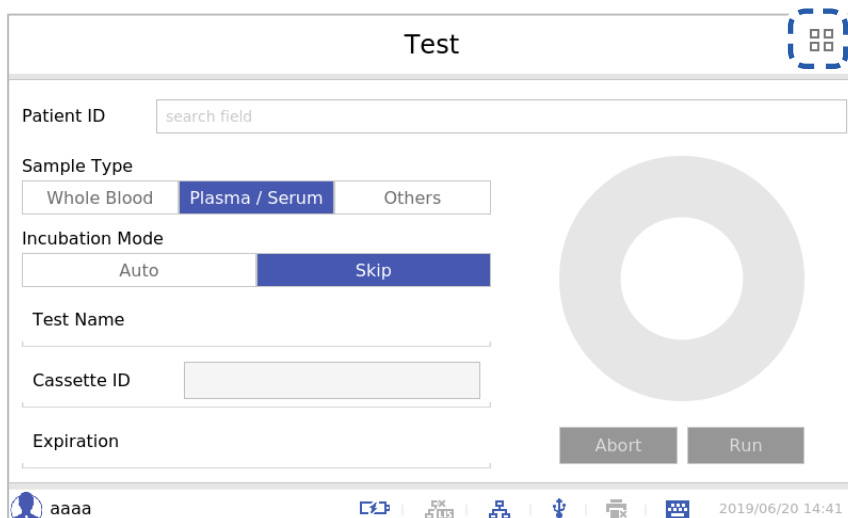
Quality control of an Exdia cassette can be carried out using designated quality control material.

1. Enter ID and the password and press the **[Login]** button.



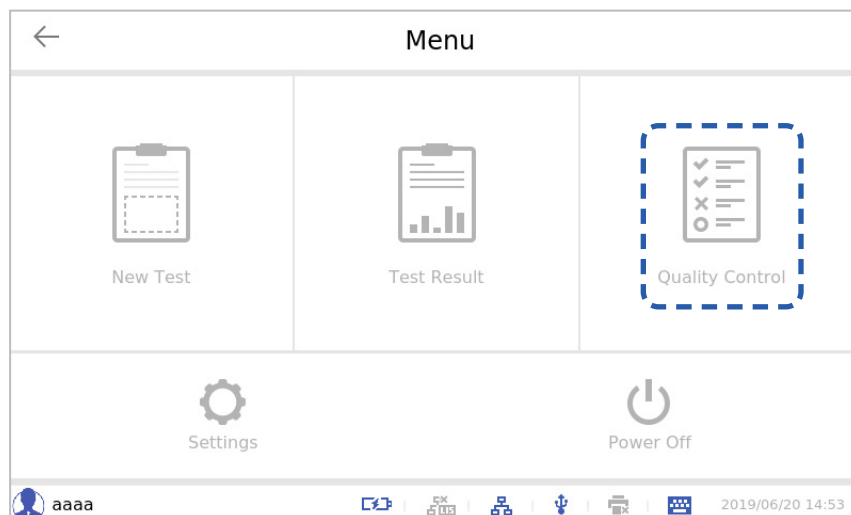
The login screen for the Exdia TRF Plus device. It features the title 'Exdia TRF Plus' at the top left and a power icon at the top right. Below the title are two user selection icons: a single person icon labeled 'aaaa' and a group of people icon labeled 'Others'. In the center, there is a dashed blue box containing a login form with fields for 'User ID' and 'Password', and a 'Login' button. At the bottom, there is a status bar with various icons and the date/time '2019/06/20 14:41'.

2. Press the  button.

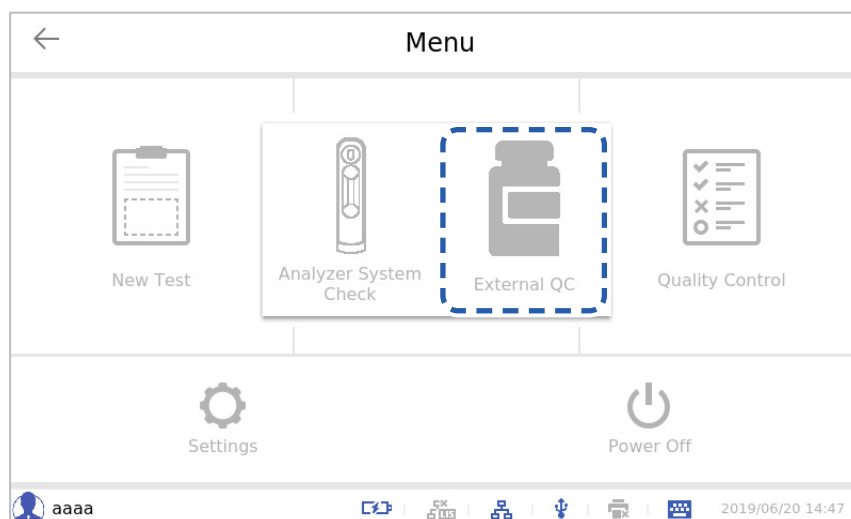


The 'Test' screen for the Exdia TRF Plus device. It has a title bar with the word 'Test' and a button with a grid icon. The screen contains several input fields and buttons: 'Patient ID' with a 'search field' placeholder; 'Sample Type' with buttons for 'Whole Blood', 'Plasma / Serum' (which is highlighted), and 'Others'; 'Incubation Mode' with buttons for 'Auto' and 'Skip' (which is highlighted); 'Test Name' with a text input field; 'Cassette ID' with a text input field; and 'Expiration' with a text input field. On the right side, there is a large circular graphic. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows the user 'aaaa', various icons, and the date/time '2019/06/20 14:41'.

3. Press the **[Quality Control]** button.



4. Press the **[External QC]** button.



The 'External Quality Control' screen will be displayed.



Note


If QC data has not been registered, refer to **"Quality Control of the Cassette"** on page 97.

5. Press the  button.

External Quality Control

QC Material

PB 3in1



Brand / Lot

PB / PB-1234

Level

Level 1

Level 2

Level 3


Test Name

Cassette ID

Abort

Run

aaaa




2019/06/20 14:50

6. Select QC data and press the [OK] button.

Select Material

Filter Text

Name



Name	Brand	Lot	Expire
PB 3in1	PB	PB-1234	2020/06/01

OK

Cancel



Note

QC Name/Brand/Lot/Expire information will be displayed.

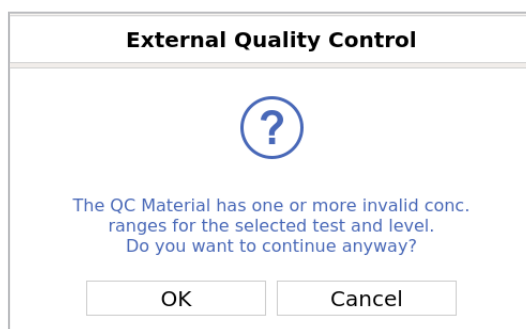
7. Select the level of QC data and insert a cassette into the cassette slot.

The screenshot shows the 'External Quality Control' window. On the left, there are input fields for 'QC Material' (PB 3in1), 'Brand / Lot' (PB / PB-1234), 'Level' (with 'Level 1' selected), 'Test Name' (Exdia 3-in-1), and 'Cassette ID' (FC7B1-00316). On the right, a large circular progress indicator displays the word 'Ready'. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows a user icon labeled 'aaaa', system icons, and the date/time '2019/06/20 14:50'.

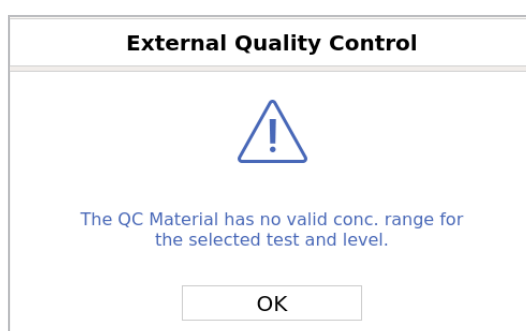
8. Press the [Run] button.

This screenshot is identical to the previous one, but the 'Run' button at the bottom right is highlighted with a dashed blue rectangular box, indicating it should be pressed.

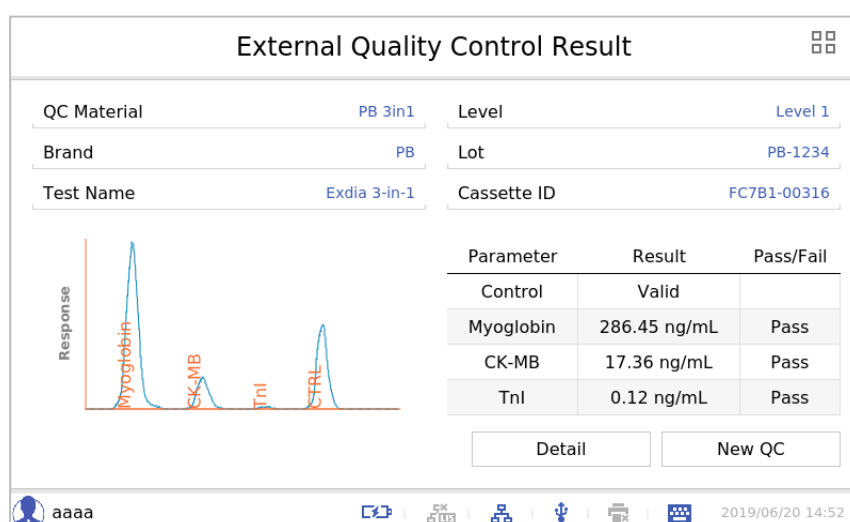
- If the QC material is partially missing the concentration value of an analyte corresponding to the inserted cassette, 'The QC Material has no one or more invalid conc. Ranges for the selected test and level. Do you want to continue anyway?' message will be displayed on the screen.



- If the QC material is entirely missing the concentration value of the analyte corresponding to the inserted cassette, 'The QC Material has no valid conc. range for the selected test and level.' message will be displayed on the screen.



9. The 'External Quality Control Result' screen appears.



10. Press the **[Detail]** button to check the detailed information.

Detail Information

Parameter	Result	Ref.Range	Pass/Fail
Control	Valid	-	-
Myoglobin	286.45 ng/mL	250 - 310 ng/mL	Pass
CK-MB	17.36 ng/mL	15 - 21 ng/mL	Pass
Tnl	0.12 ng/mL	0.03 - 0.2 ng/mL	Pass

OK

Settings

In Setting, you can set Date/Time/Language, Network/LIS, Printer/Sound, Operator, Advanced, Service and Quality Control.



Note

To change network-related settings, a LAN cable should be connected. Connect a LAN cable to the analyzer.

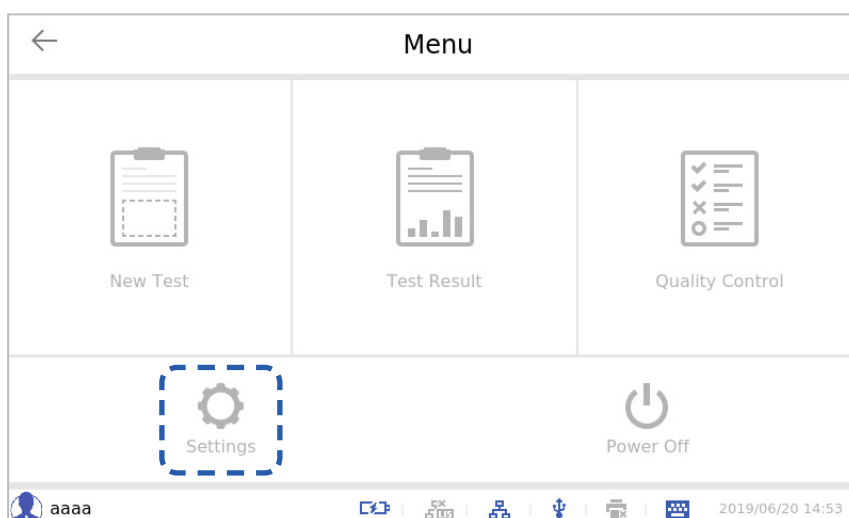
◆ Date/Time/Language

You can check the data format, time and language.

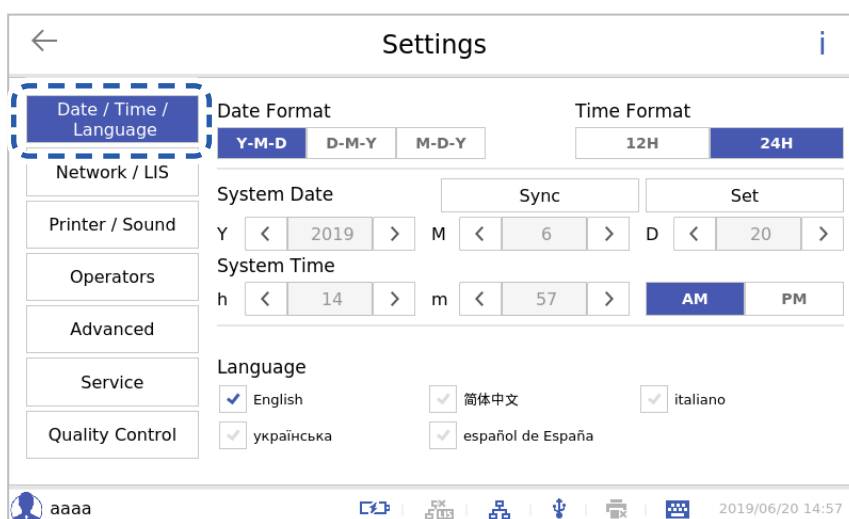
1. Enter ID and the password and press the **[Login]** button.

2. Press the  button.

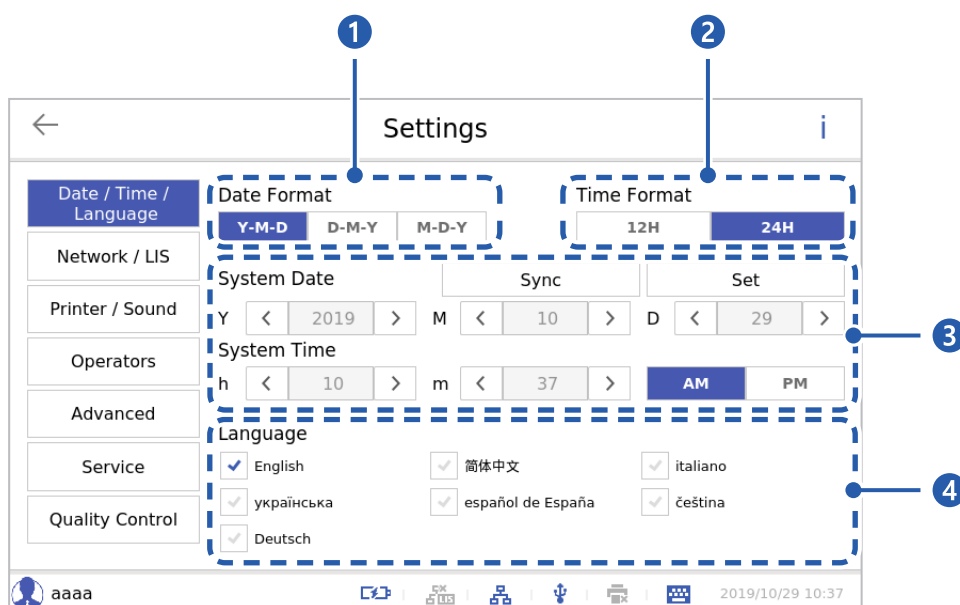
3. Press the **[Setting]** button.



4. Press the **[Date/Time/Language]** button.



■ Date/Time/Language



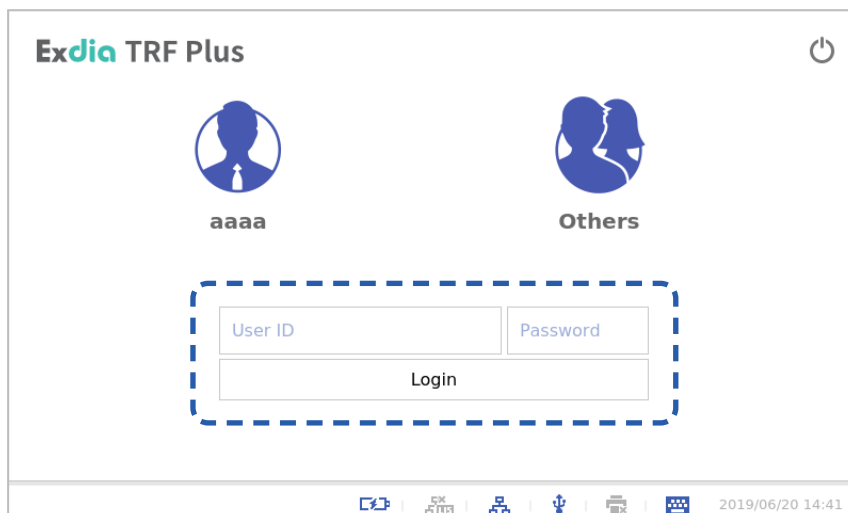
No.	Item	Description
①	Date Format	Press and select the date format. <ul style="list-style-type: none"> • Y-M-D: Year-Month-Day • D-M-Y: Day-Month-Year • M-D-Y: Month-Day-Year
②	Time Format	Press and select a time format. <ul style="list-style-type: none"> • 12H: Time displayed using AM and PM • 24H: Time displayed in 24-hour format
③	System Date	Set the date using the and buttons. You can also enter the date directly. <ul style="list-style-type: none"> • Y: Year • M: Month • D: Day
	System Time	Set the time using the and buttons. You can also enter the date directly. <ul style="list-style-type: none"> • h: Hour • m: Minute • AM / PM: Set AM or PM for the entered time. It applies only when the 12H system in No. ② is selected.

	Set Sync	<ul style="list-style-type: none"> • Sets the entered date / time as the current date / time of the reader. • If the Sync reader is connected to the Internet, the current date / time are imported from a designated time server. The correct date / time can be set only when the time zone of the region where the reader is installed is set correctly.
4	Language	<p>Press and select a language.</p> <ul style="list-style-type: none"> • English: English • 简体中文: Chinese • Italiano: Italian • Українська: Ukrainian • Español de España: Spanish • Čeština: Czech • Deutsch: German

◆ Network/LIS

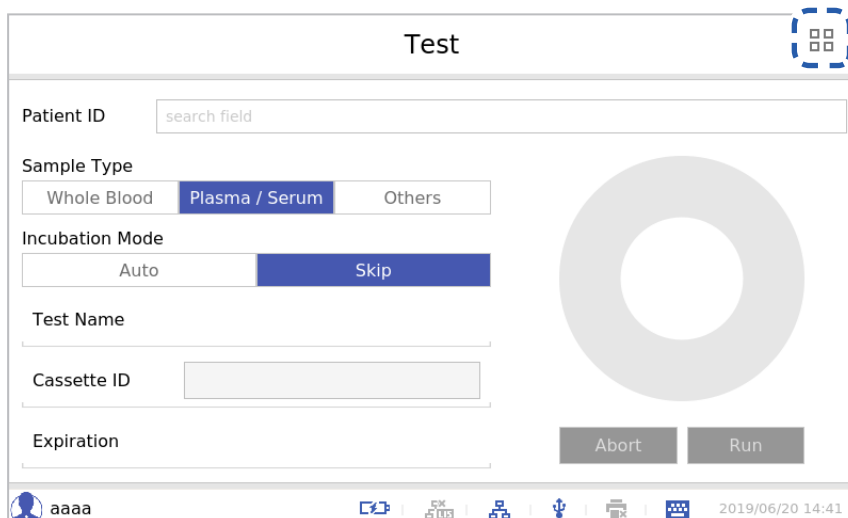
Connect to a network and the LIS server.

1. Enter ID and the password and press the **[Login]** button.



The login screen for the Exdia TRF Plus analyzer. It features the title 'Exdia TRF Plus' at the top left and a power icon at the top right. Below the title are two user selection icons: a single person icon labeled 'aaaa' and a group of people icon labeled 'Others'. In the center, there is a dashed blue box containing a login form with fields for 'User ID' and 'Password', and a 'Login' button. At the bottom, there is a status bar with various system icons and the date/time '2019/06/20 14:41'.

2. Press the  button.

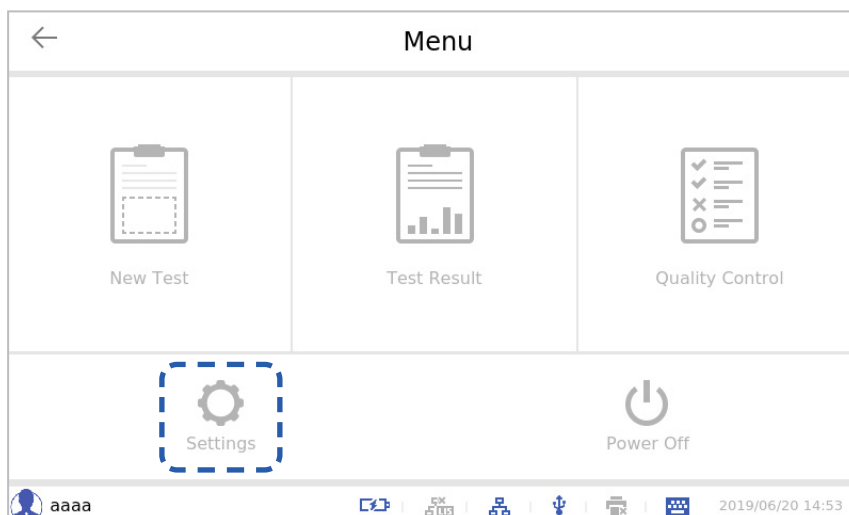


The 'Test' screen for the Exdia TRF Plus analyzer. It has a title bar with the word 'Test' and a grid icon in the top right corner. The screen contains several input fields and buttons: 'Patient ID' with a search field, 'Sample Type' with buttons for 'Whole Blood', 'Plasma / Serum' (selected), and 'Others', 'Incubation Mode' with buttons for 'Auto' and 'Skip' (selected), 'Test Name', 'Cassette ID', and 'Expiration'. On the right side, there is a large circular graphic. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows the user 'aaaa', system icons, and the date/time '2019/06/20 14:41'.

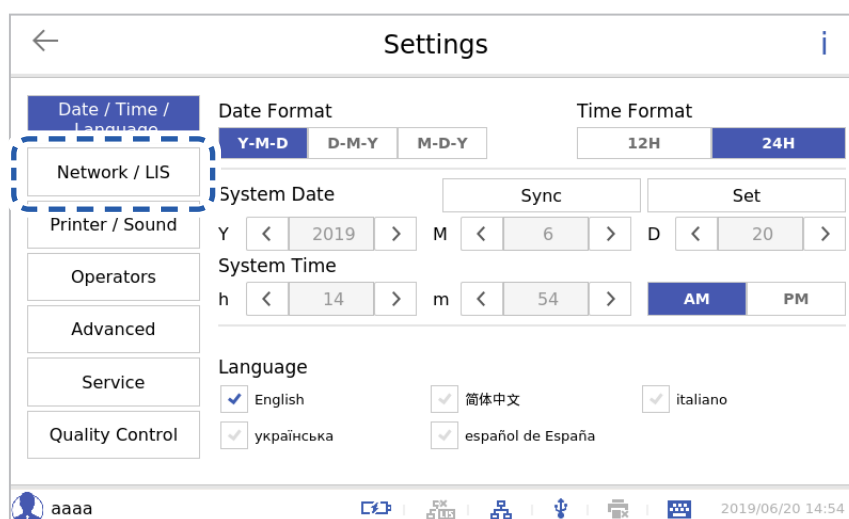


The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer's requirements.

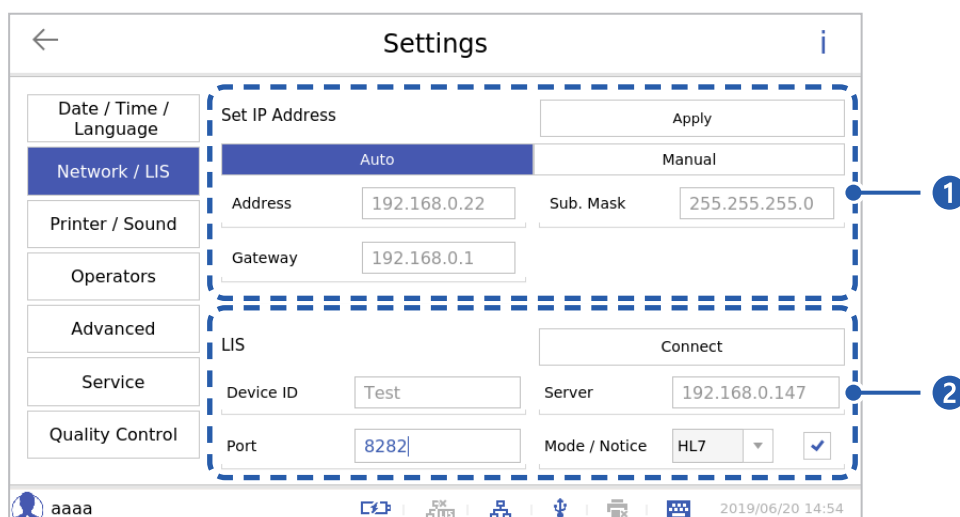
3. Press the **[Setting]** button.



4. Press the **[Network/LIS]** button.



Network/LIS



No.	Item	Description
1	Set IP Address	<p>Press and select the IP address setting method.</p> <ul style="list-style-type: none"> • Apply: Apply the set IP address setting method. • Auto: IP address is set automatically. • Manual: IP address is set manually. To set it manually, enter Address, Sub. Mask and Gateway address.
2	LIS (LIS server connection information)	<p>Press and select whether or not to connect the LIS server.</p> <ul style="list-style-type: none"> • Connect: Connect to LIS system. • Connecting: Attempting to connect to the LIS server. • Disconnect: Disconnect from LIS system. • Device ID: Characters as identifier for one-on-multiple communications. • Server: IP of the server to connect • Port: Port of the server to connect • Mode: Communication protocol (HL7/ASTM/Custom) • Notice: Indicates success or failure after sending data to the LIS.

◆ Printer/Sound

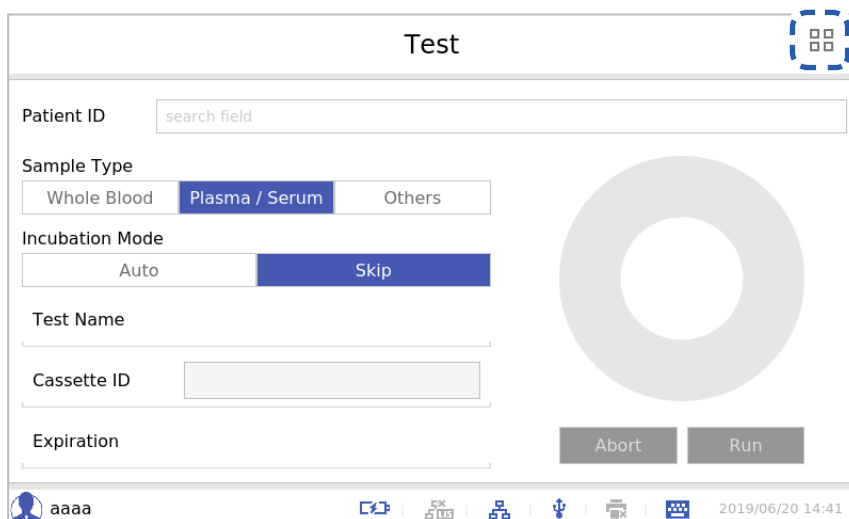
Set the printer, printing items and the sound volume.

1. Enter ID and the password and press the **[Login]** button.



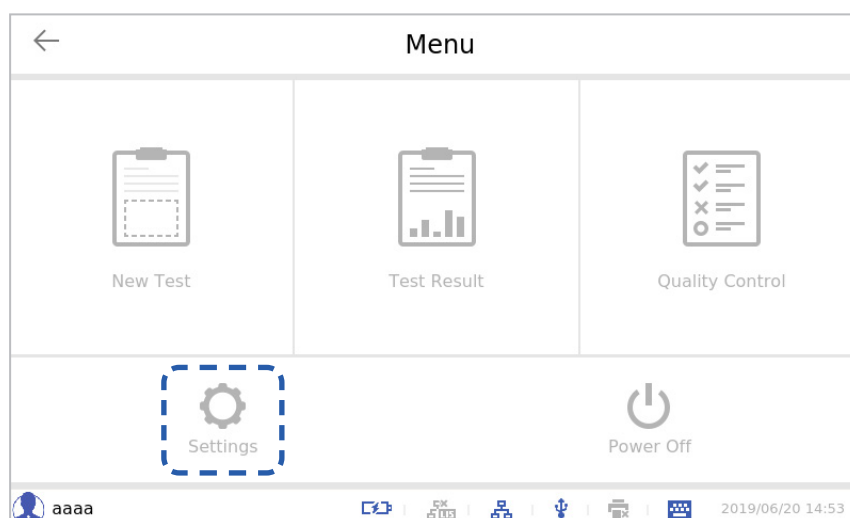
The login screen for the Exdia TRF Plus device. It features the title 'Exdia TRF Plus' at the top left and a power icon at the top right. Below the title are two user selection icons: a single person icon labeled 'aaaa' and a group of people icon labeled 'Others'. In the center, there is a dashed blue box containing a login form with fields for 'User ID' and 'Password', and a 'Login' button. At the bottom, there is a status bar with various system icons and the date/time '2019/06/20 14:41'.

2. Press the  button.

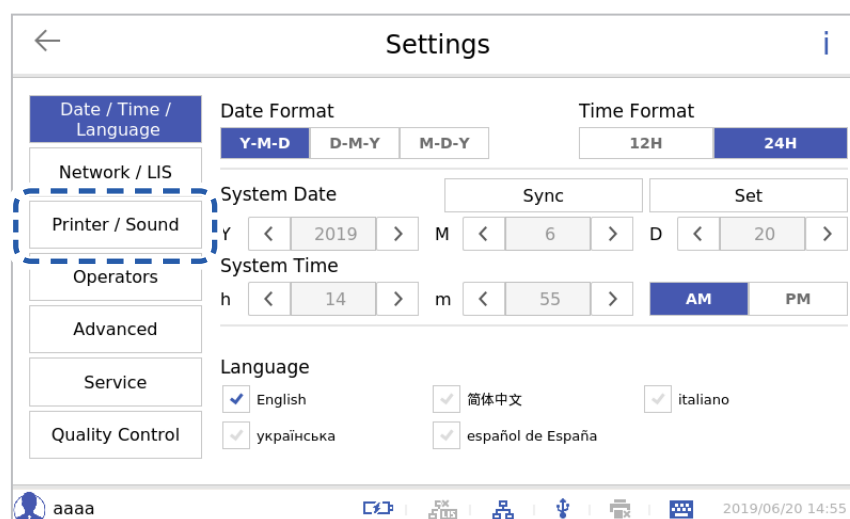


The 'Test' screen for the Exdia TRF Plus device. It has a title bar with the word 'Test' and a grid icon in the top right corner. The screen contains several input fields and buttons: 'Patient ID' with a 'search field' placeholder; 'Sample Type' with buttons for 'Whole Blood', 'Plasma / Serum' (which is highlighted), and 'Others'; 'Incubation Mode' with buttons for 'Auto' and 'Skip' (which is highlighted); 'Test Name' with a text input field; 'Cassette ID' with a text input field; and 'Expiration' with a text input field. On the right side, there is a large circular graphic. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows the user 'aaaa', system icons, and the date/time '2019/06/20 14:41'.

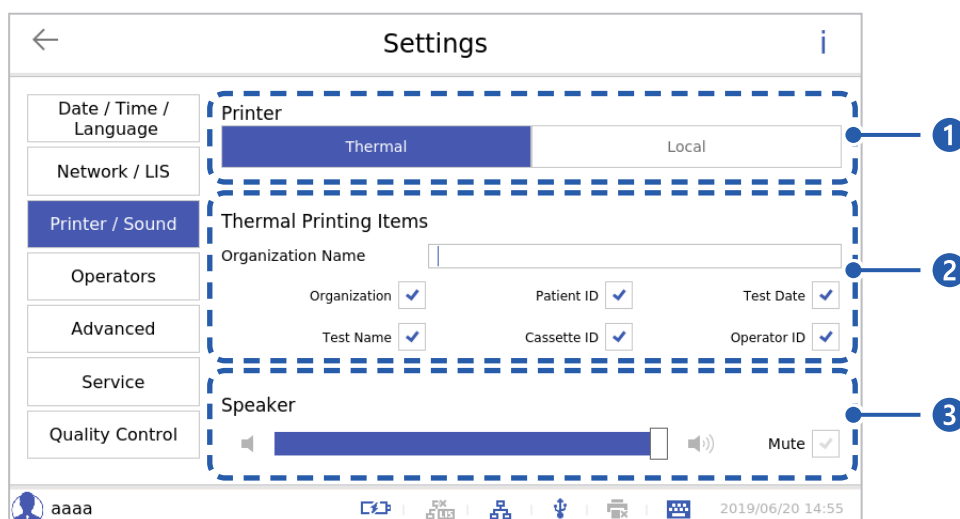
3. Press the **[Setting]** button.



4. Press the **[Printer/Sound]** button.



Printer/Sound

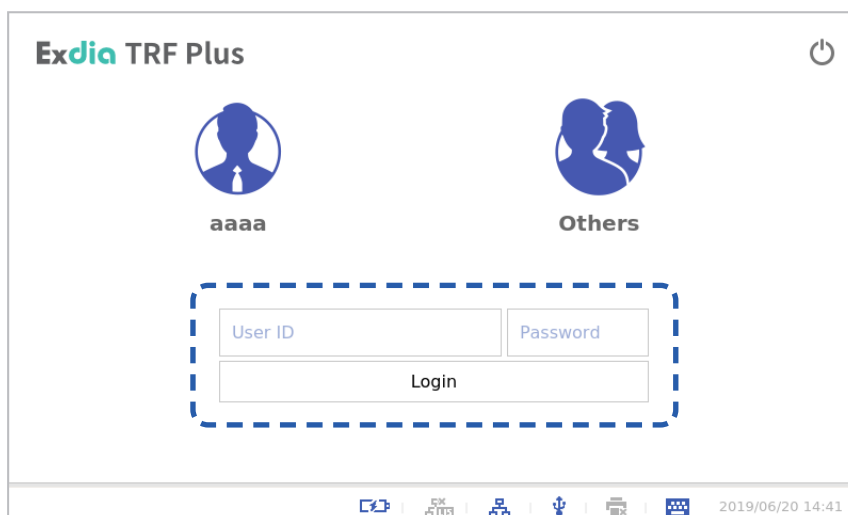


No.	Item	Description
1	Printer	<p>Press and select the printer type.</p> <ul style="list-style-type: none"> • Thermal: Printing is done by the built-in printer in the analyzer. • Local: Printing is done by a printer connected to the analyzer. • The printer can be connected to the analyzer through USB port. • Only a HP LaserJet model can be connected to the analyzer. (HP LaserJet 1020/Plus, HP LaserJet Pro P1106, HP LaserJet Pro P1108, HP LaserJet Pro P1102w HP LaserJet Pro CP1025) • When a printer is connected to the analyzer, the color of the printer icon at the bottom of the screen will light up (🖨️).
2	Thermal Printing Items (Items printed when the built-in printer is used)	<p>Set the items printed when the thermal printer of the analyzer is used. Select the value of an item to be printed by entering or selecting the value.</p> <ul style="list-style-type: none"> • Organization Name: Organization name • Organization: Organization • Patient ID: Patient ID • Test Date: Test date • Test Name: Test name • Cassette ID: Cassette ID • Operator ID: Operator ID
3	Speaker	<p>Adjust the sound volume by moving the bar in the middle or turn off the sound by selecting Mute.</p>

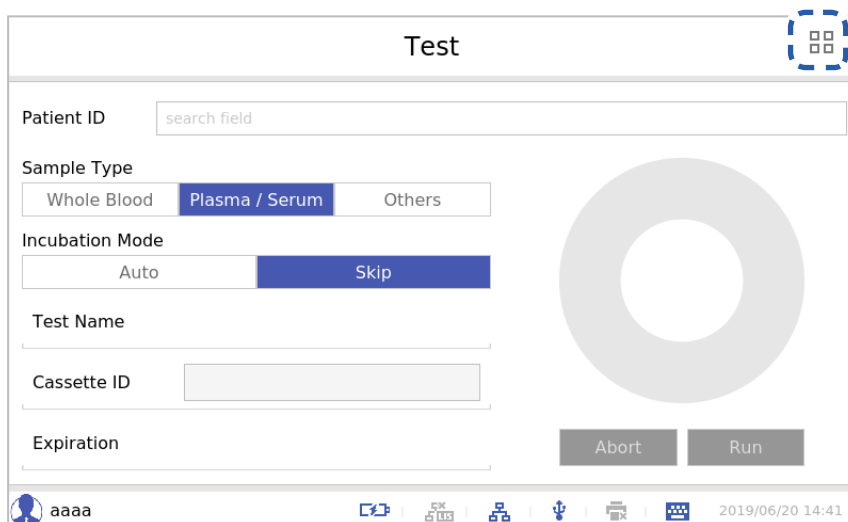
◆ Operator

View the list, register an additional operator, modify or delete an existing operator.

1. Enter ID and the password and press the **[Login]** button.

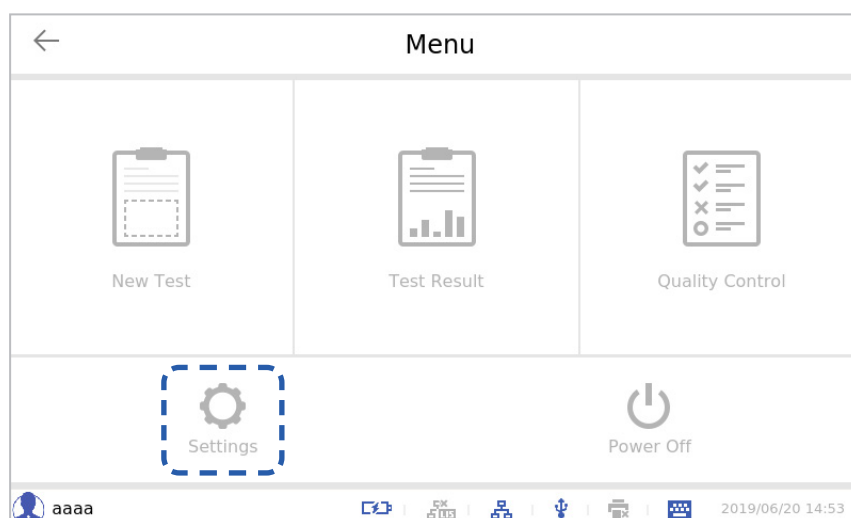


2. Press the  button.

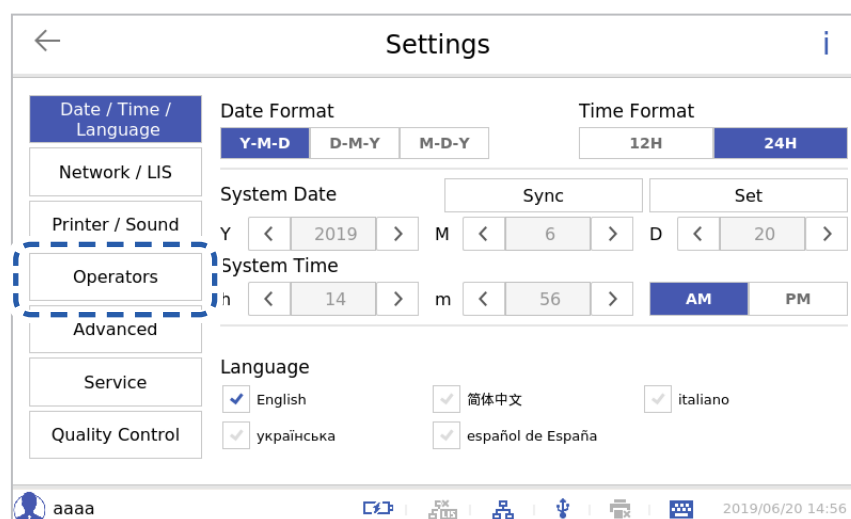


The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer's requirements.

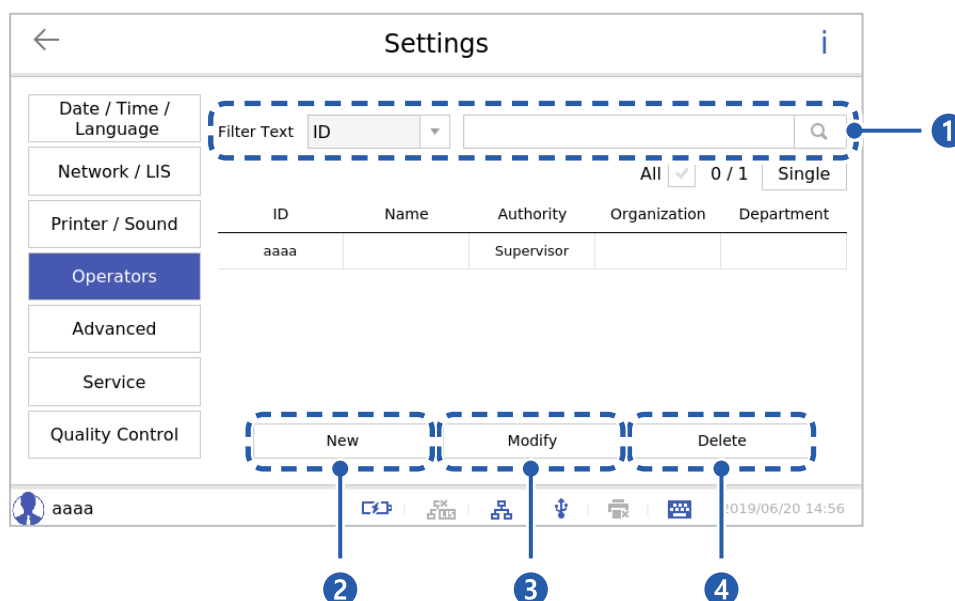
3. Press the **[Setting]** button.




4. Press the **[Operators]** button.



■ Operators



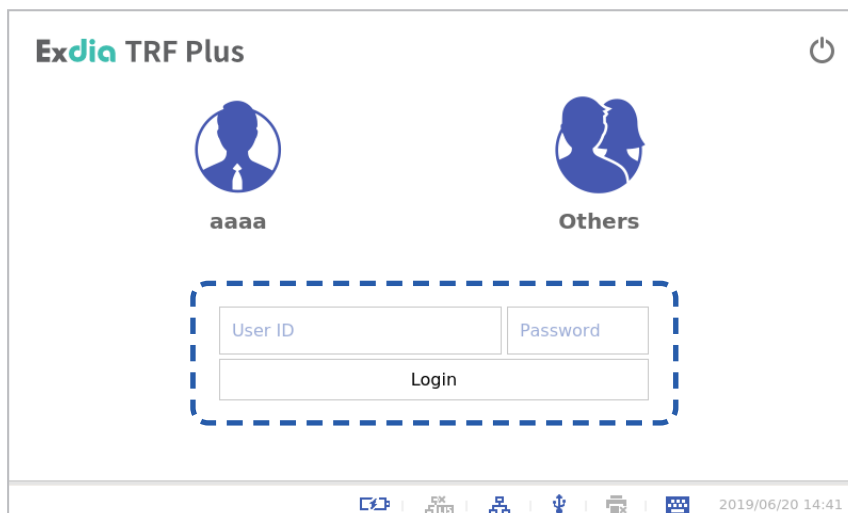
No.	Item	Description
1	Filter Text	<p>Select an item category and enter the keyword to search. Then press the  button.</p> <ul style="list-style-type: none"> • ID: Search for an ID. • Name: Search for a name. • Authority: Search for an authority. • Organization: Search for an organization. • Department: Search for a department.
2	New	<p>Register a new operator by pressing the New button.</p> <ul style="list-style-type: none"> • ID: Enter ID. • Password: Enter the password. • Confirm(PW): Enter the password again. • Name: Enter the name. • Organization: Enter the organization. • Department: Enter the department. • Authority: Select the authority. A supervisor holds all authorities but an operator can only modify and delete information. • OK: Press this button to register the entered information. • Cancel: Press this button to cancel registration.

No.	Item	Description
3	Modify	<p>Modify the information of an operator by selecting the operator and pressing the [Modify] button.</p> <ul style="list-style-type: none"> • ID: Enter ID. • Password: Enter the password. • Confirm(PW): Enter the password again. • Name: Enter the name. • Organization: Enter the organization. • Department: Enter the department. • Authority: Select the authority. A supervisor holds all authorities but an operator can only modify and delete information. • OK: Press this button to register the entered information. • Cancel: Press this button to cancel registration.
4	Delete	<p>Delete the information regarding an operator by selecting the operator and pressing the [Delete] button. When the screen verifying whether or not to delete appears, press the [OK] button. Press the [Cancel] to cancel deletion.</p>

◆ Advanced

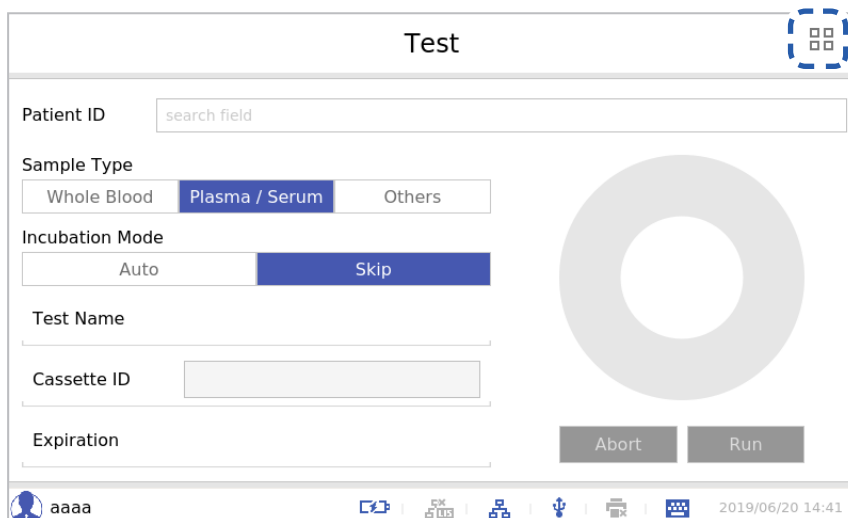
Advanced settings.

1. Enter ID and the password and press the **[Login]** button.



The login screen for the Exdia TRF Plus analyzer. It features the title 'Exdia TRF Plus' at the top left and a power icon at the top right. Below the title are two user selection icons: a single person icon labeled 'aaaa' and a group of people icon labeled 'Others'. In the center, there is a login form with a dashed blue border. The form contains two input fields: 'User ID' and 'Password', followed by a 'Login' button. At the bottom of the screen, there is a status bar with various system icons and the date/time '2019/06/20 14:41'.

2. Press the  button.

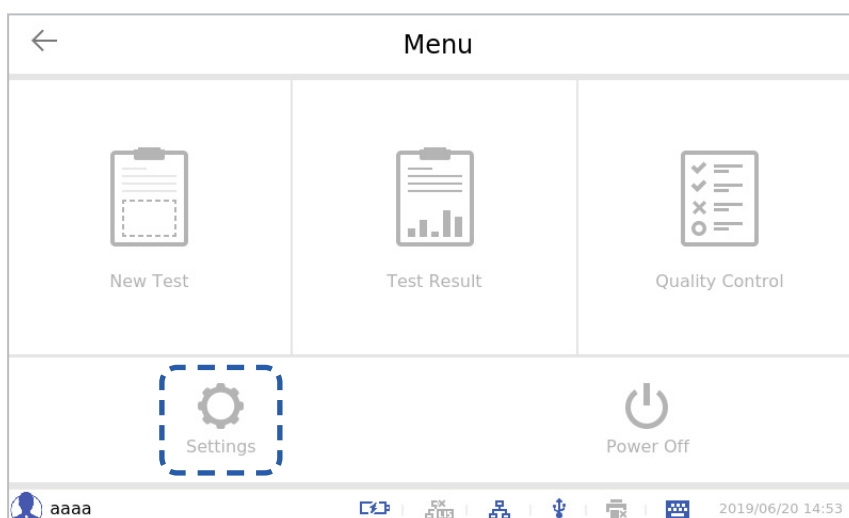


The 'Test' screen for the Exdia TRF Plus analyzer. It has a title bar with the word 'Test' and a grid icon in the top right corner. The screen is divided into two main sections. The left section contains several input fields and selection buttons: 'Patient ID' with a search field, 'Sample Type' with buttons for 'Whole Blood', 'Plasma / Serum' (which is selected), and 'Others', 'Incubation Mode' with buttons for 'Auto' and 'Skip' (which is selected), 'Test Name', 'Cassette ID', and 'Expiration'. The right section features a large circular graphic. At the bottom right of the main area are 'Abort' and 'Run' buttons. The bottom status bar shows the user 'aaaa', system icons, and the date/time '2019/06/20 14:41'.

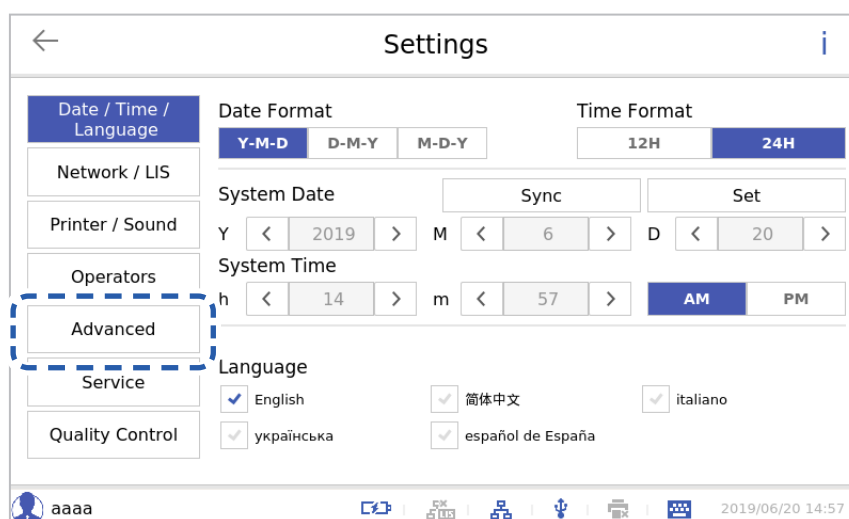


The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer's requirements.

3. Press the **[Setting]** button.



4. Press the **[Advanced]** button.



Advanced

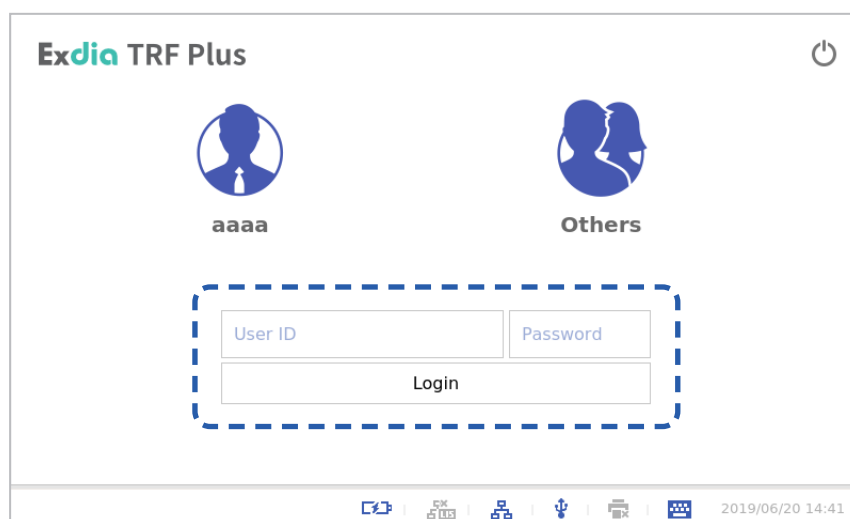
No.	Item	Description
1	Regular instrument check (Set the 'instrument check' period)	Set the 'instrument check' period. When the number of days entered has passed, a message saying 'Instrument Check' will be displayed each time the Run button is pressed on the Test screen.
2	Reuse Cassette	If it is checked, the previously used cassette can be reused.
3	Units Conversion (iFOB)	<ul style="list-style-type: none"> ng/mL(default): If pressed, the unit will be changed to ng/mL. µg/g: If pressed, the unit will be changed to µg/g.
4	Incubation Mode	Adjust total test duration, including incubation time. <ul style="list-style-type: none"> Auto: The test begins after the incubation in the analyzer is carried out according to the set time. Skip: The test begins immediately without incubation in the analyzer.
5	Patient Registration	Register patient ID or leave it blank. <ul style="list-style-type: none"> Auto prefix: A patient ID on the Test screen is created automatically with the combination of a character entered on Auto Prefix and a digit entered on Auto Prefix Digits. Enter a value on Auto Prefix and Auto Prefix Digits. Empty: A patient ID on the Test screen is set blank.

◆ Service

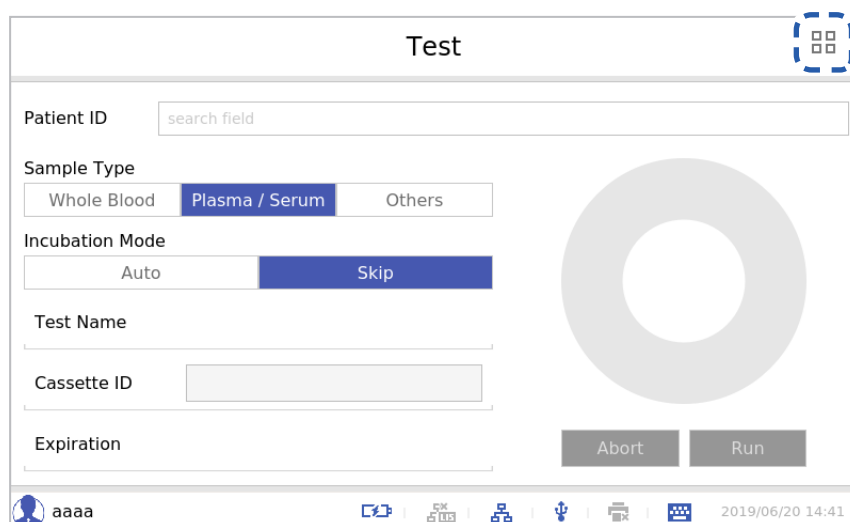
This function enables communication between the equipment and a remote supporter with the remote support server (SSH server).

Connect to the SSH server by entering the SSH server information (Address/Port/ID/Password), and the remote supporter can connect as a local host of the server and provide remote support.

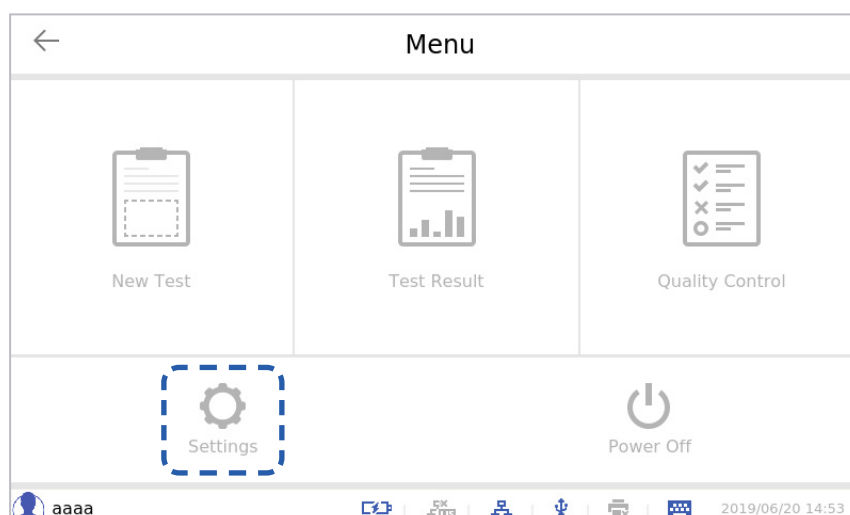
1. Enter ID and the password and press the **[Login]** button.



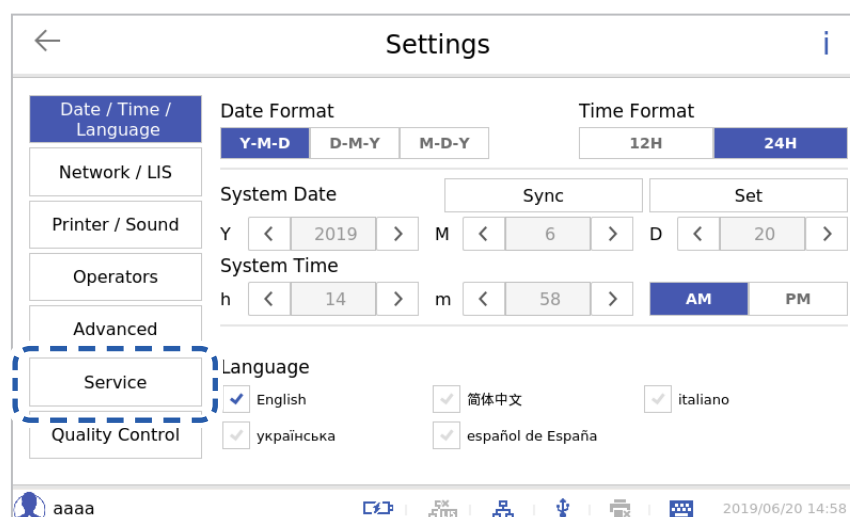
2. Press the  button.



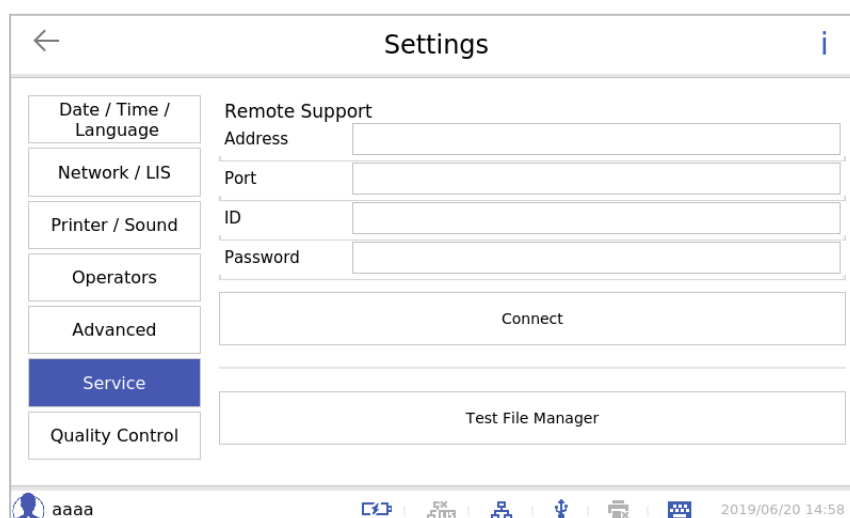
3. Press the **[Setting]** button.



4. Press the **[Service]** button.



The Service Settings screen will appear.

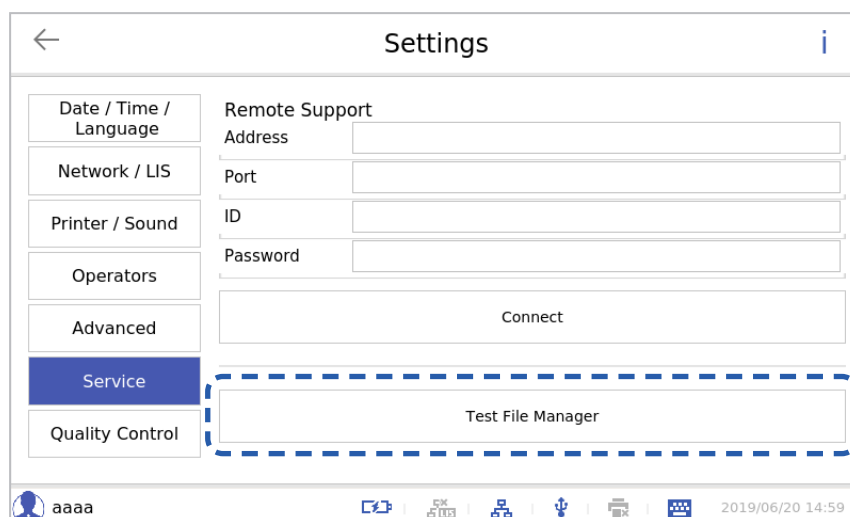


Test File Manager

Import a new test method or manage the previously saved test method.

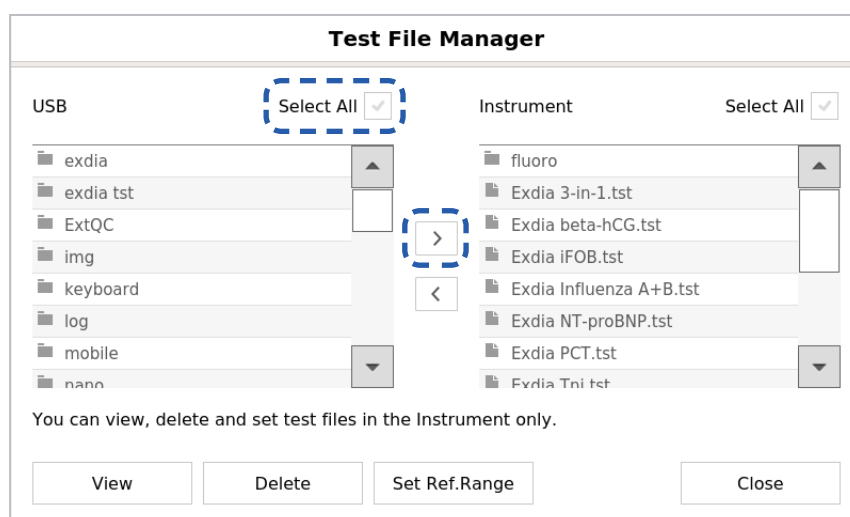
Before executing the Test File Manager, connect a USB memory to the analyzer.

Press the **[Test File Manager]** button.

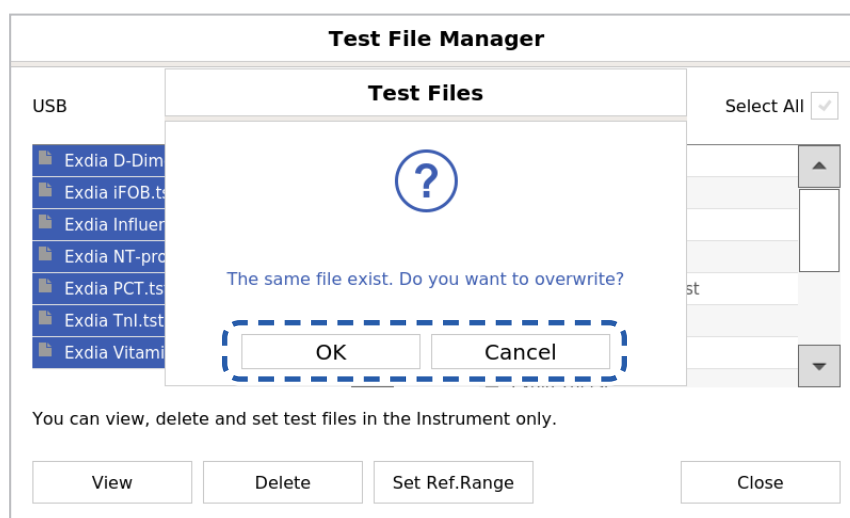


■ Import

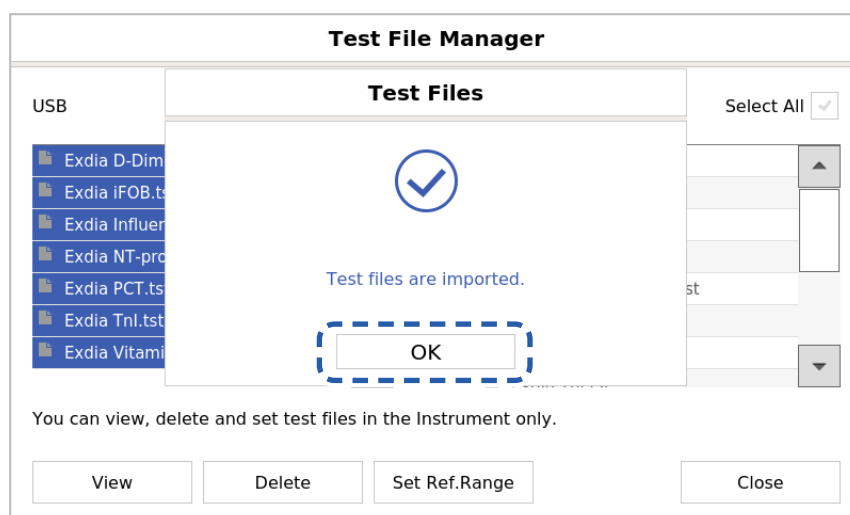
- To import all test files from a USB memory, press the **[Select All]** checkbox and press the **[>]** button.




- If a file with the same name exists, a message window asking whether or not to overwrite will be displayed. To overwrite, press the **[OK]** button, or press the **[Cancel]** button if you do not wish to overwrite.

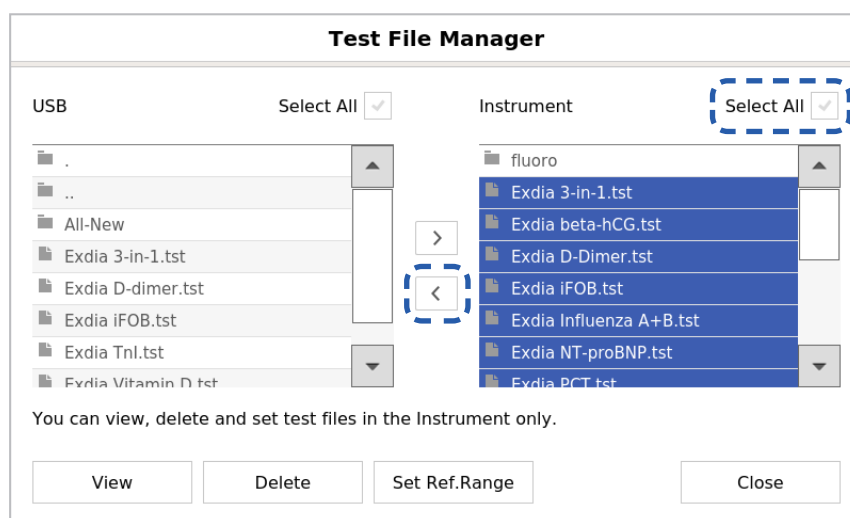


- Press the **[OK]** button.

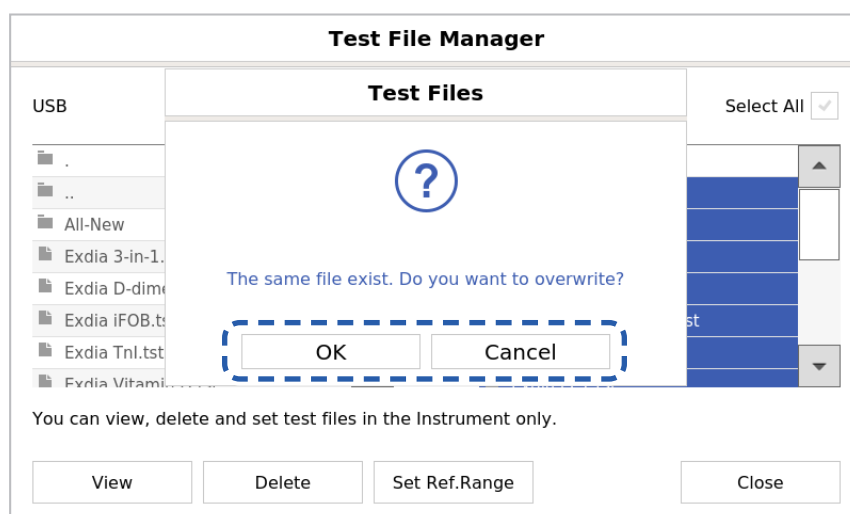



Export

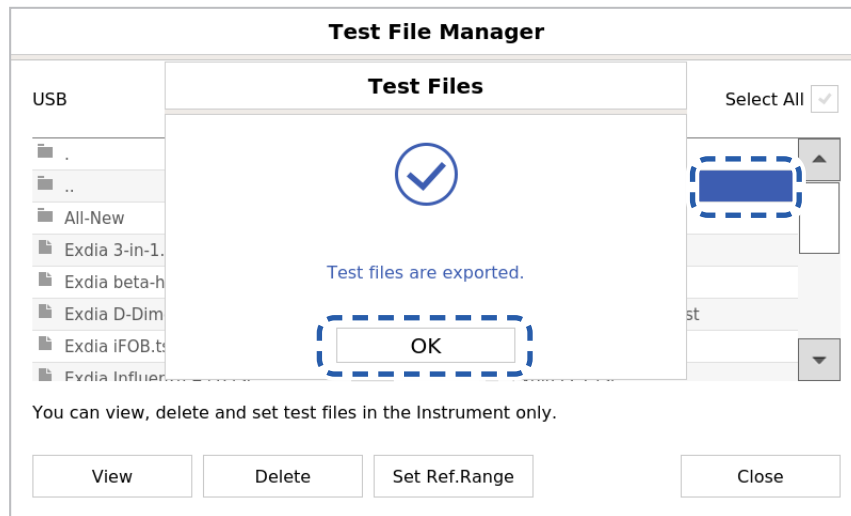
- To export all test files to a USB memory, press the [Select All] checkbox and press the  button.



- If a file with the same name exists, a message window asking whether or not to overwrite will be displayed. To overwrite, press the [OK] button, or press the [Cancel] button if you do not wish to overwrite.

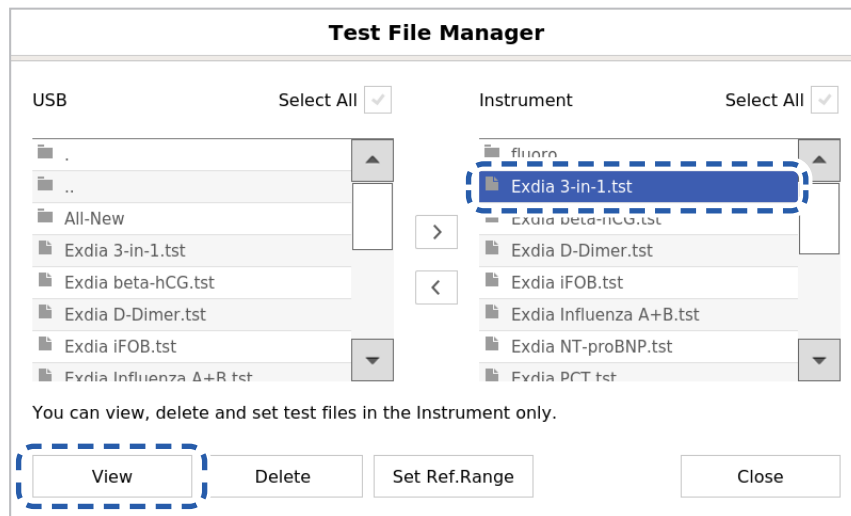


- To select and export a specific test file to a USB memory, select the file and press the  button. Then press the **[OK]** button.



■ View Detail

- To view the detail of a test file, select the test file and press the **[View]** button.



View the detail of a selected test file.

USB

.

..

All-New

Exdia

Exdia

Exdia

Exdia

Exdia

You can

Test Name

Exdia 3-in-1

Window

1

Window Name

Window1

Description

Myoglobin, CK-MB, Tnl, CTRL

Test Line No.

4

Sample Type

Plasma, Whole Blood, Serum

TestCode (LID)

55

Select All

☒

OK

Close

■ Delete

- To delete a test file, select the test file and press the **[Delete]** button.

Test File Manager

USB

Select All ☒

.

..

All-New

Exdia 3-in-1.tst

Exdia beta-hCG.tst

Exdia D-Dimer.tst

Exdia iFOB.tst

Exdia Influenza A+B.tst

Instrument

Select All ☒

Exdia 3-in-1.tst

Exdia beta-hCG.tst

Exdia D-Dimer.tst

Exdia iFOB.tst

Exdia Influenza A+B.tst

Exdia NT-proBNP.tst

Exdia PCT.tst

You can view, delete and set test files in the Instrument only.

View

Delete

Set Ref.Range

Close

The screen for entering the password will appear. Enter the password and press the **[OK]** button.

Are you sure you want to delete selected test files?

Confirm Password

.

.

.

.

.

.

.

.

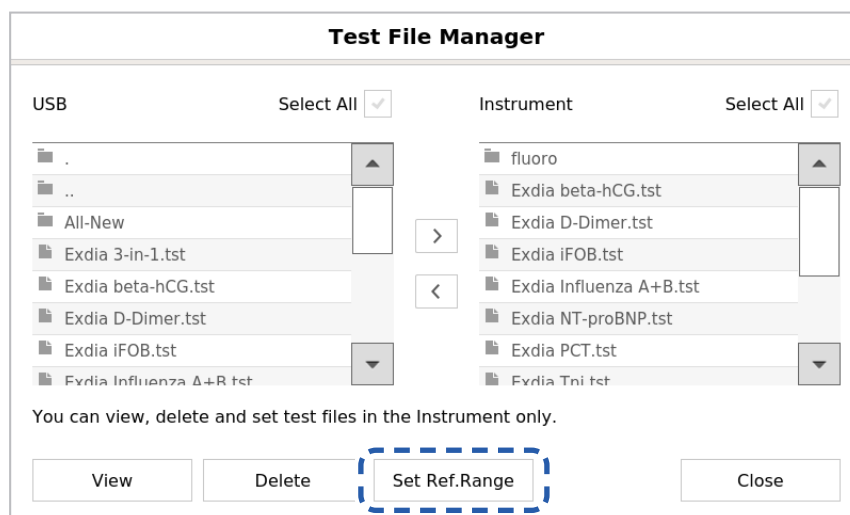
OK

Cancel

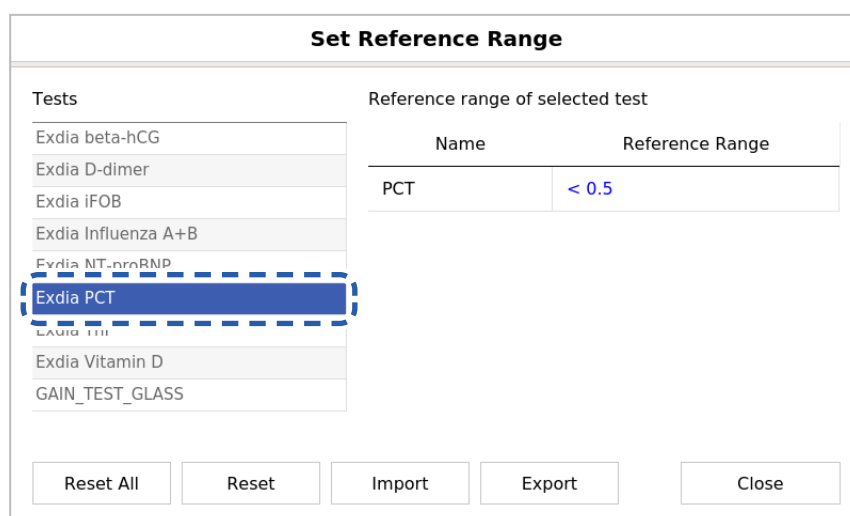
Set Ref.Range

Change and apply a reference range directly to a test result. Changed reference range will be applied to the test result immediately.

1. Press the **[Set Ref.Range]** button.



2. Select a test.



3. Press the reference range you wish to change.

Set Reference Range

Tests

Exdia beta-hCG
Exdia D-dimer
Exdia iFOB
Exdia Influenza A+B
Exdia NT-proBNP
Exdia PCT
Exdia TnI
Exdia Vitamin D
GAIN_TEST_GLASS

Reference range of selected test

Name	Reference Range
PCT	< 0.5

Reset All

Reset

Import

Export

Close

4. After changing the reference range, press the **[Enter]** button.

Set Reference Range

Tests

Exdia beta-hCG

Reference range of selected test

Name	Reference Range
	< 0.5

Reference Range

q w e r t y u i o p + -

a s d f g h j k l * / 1/2

caps z x c v b n m = . Back

123/Sym En Clear Enter

Cancel

■ Reset All

To reset the reference range for all test files, press the **[Reset All]** button.

Set Reference Range

Tests

Exdia beta-hCG

Exdia D-dimer

Exdia iFOB

Exdia Influenza A+B

Exdia NT-proBNP

Exdia PCT

Exdia Tnl

Exdia Vitamin D

GAIN_TEST_GLASS

Reference range of selected test

Name	Reference Range
PCT	< 0.5

Reset All

Reset

Import

Export

Close

The screen for entering the password will appear. Enter the password and press the **[OK]** button.

Are you sure to reset all of the reference range data?

Confirm Password

OK

Cancel

■ Reset

To reset the reference range of a specific test file, select the test file and press the **[Reset]** button.

Set Reference Range

Tests

Exdia beta-hCG

Exdia D-dimer

Exdia iFOB

Exdia Influenza A+B

Exdia NT-proRNP

Exdia PCT

Exdia Tm

Exdia Vitamin D

GAIN_TEST_GLASS

Reference range of selected test

Name	Reference Range
PCT	< 0.5

Reset All

Reset

Import

Export

Close

The screen asking whether to reset the reference range will appear. Press the **[OK]** button.

Question

?

Are you sure to reset this reference range only?

OK

Cancel

■ Import

A reference range file in a USB memory can be imported.
Connect the USB memory containing the reference range file and press the **[Import]** button.

Set Reference Range

Tests

Exdia beta-hCG

Exdia D-dimer

Exdia iFOB

Exdia Influenza A+B

Exdia NT-proBNP

Exdia PCT

Exdia Tnl

Exdia Vitamin D

GAIN_TEST_GLASS

Reference range of selected test

Name	Reference Range
PCT	< 0.5

Reset All

Reset

Import

Export

Close

When the 'Import Reference Range' screen appears, select a reference range file (.conf) and press the **[Import]** button.

Import Reference Range

Reference Range Files

refList_PTH60-A00004.conf

Import

Close

The screen asking whether or not to import the reference file will appear. Press the **[OK]** button.

Question

?

Are you sure to import this reference range file?

OK

Cancel

■ Export

Reference ranges included in the analyzer can be exported as a file.
Connect a USB memory and press the **[Export]** button.

Set Reference Range

Tests

Exdia beta-hCG

Exdia D-dimer

Exdia iFOB

Exdia Influenza A+B

Exdia NT-proBNP

Exdia PCT

Exdia Tnl

Exdia Vitamin D

GAIN_TEST_GLASS

Reference range of selected test

Name	Reference Range
PCT	< 0.5

Reset All

Reset

Import

Export

Close

A screen saying that the reference range files have been exported will appear. Press the **[OK]** button.

Export

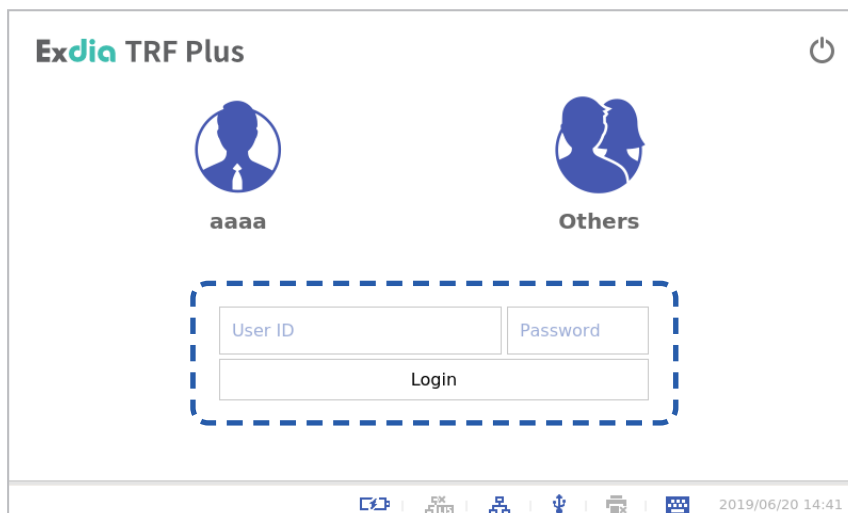
Reference range file are exported.

OK

◆ Quality Control of the Cassette

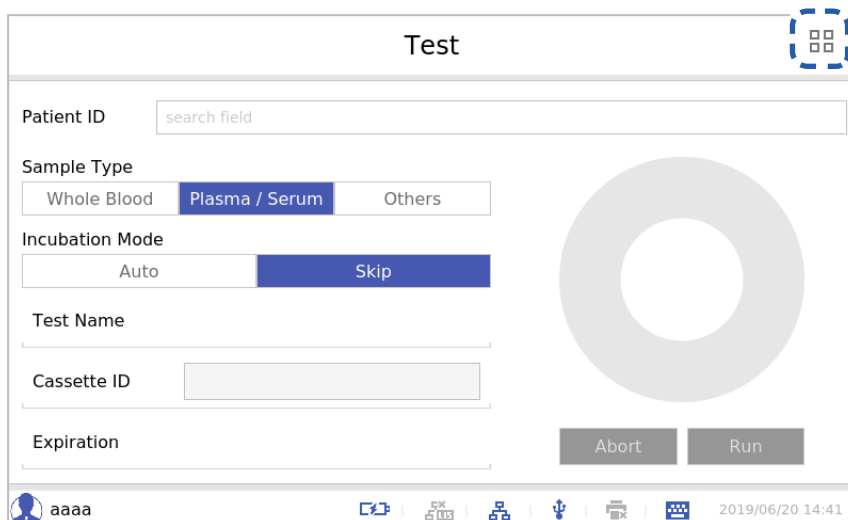
For the quality control of the Exdia cassette, QC information is required. it can be managed in QC menu.

1. Enter ID and the password and press the **[Login]** button.



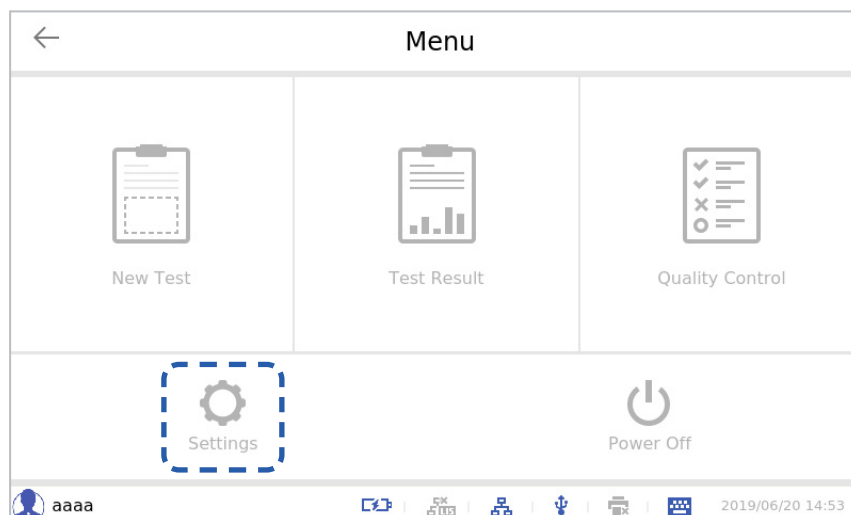
The login screen for the Exdia TRF Plus device. It features the title "Exdia TRF Plus" at the top left and a power icon at the top right. Below the title are two user selection icons: a single person icon labeled "aaaa" and a group of people icon labeled "Others". In the center, there is a dashed blue box containing a login form with fields for "User ID" and "Password", and a "Login" button. At the bottom, there is a status bar with various icons and the date/time "2019/06/20 14:41".

2. Press the  button.

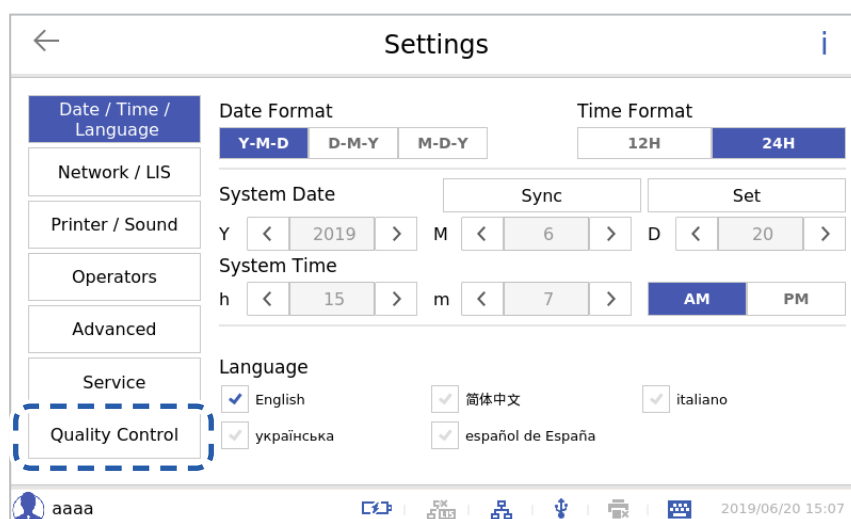


The "Test" screen for the Exdia TRF Plus device. It has a title bar with the word "Test" and a grid icon in the top right corner. The screen contains several input fields and buttons: "Patient ID" with a "search field", "Sample Type" with buttons for "Whole Blood", "Plasma / Serum" (selected), and "Others", "Incubation Mode" with buttons for "Auto" and "Skip" (selected), "Test Name", "Cassette ID", and "Expiration". On the right side, there is a large circular graphic. At the bottom right, there are "Abort" and "Run" buttons. The bottom status bar shows the user "aaaa", various icons, and the date/time "2019/06/20 14:41".

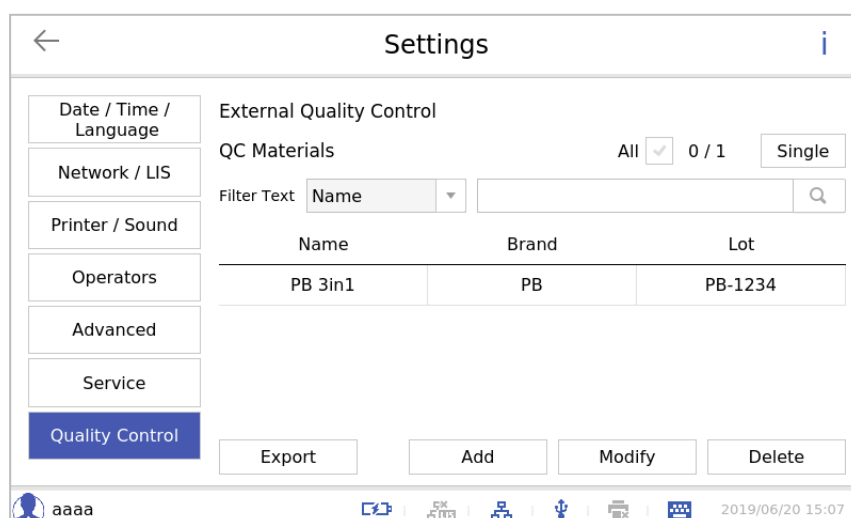
3. Press the **[Setting]** button.



4. Press the **[Quality Control]** button.



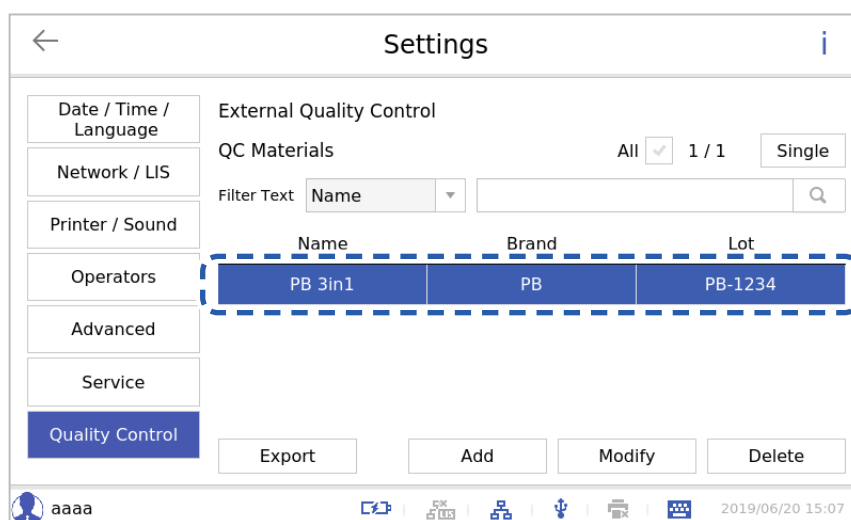
The Quality Control screen will appear.



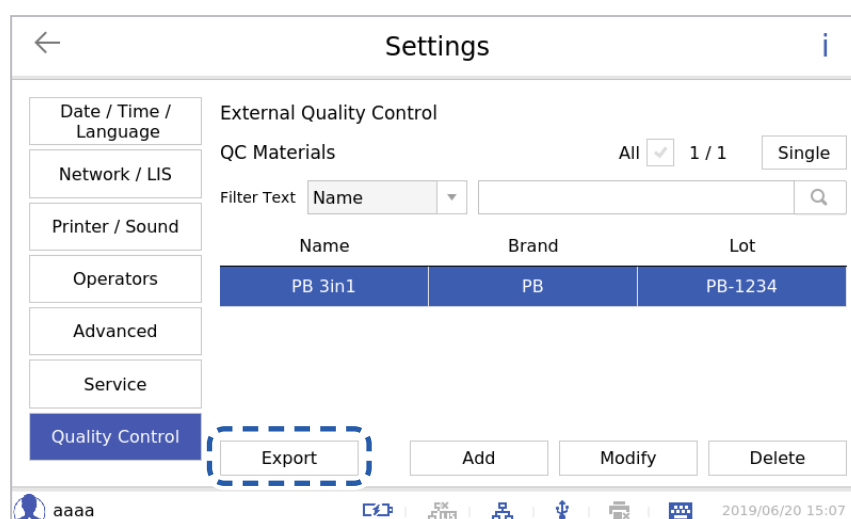
Export

A QC data file can be exported.

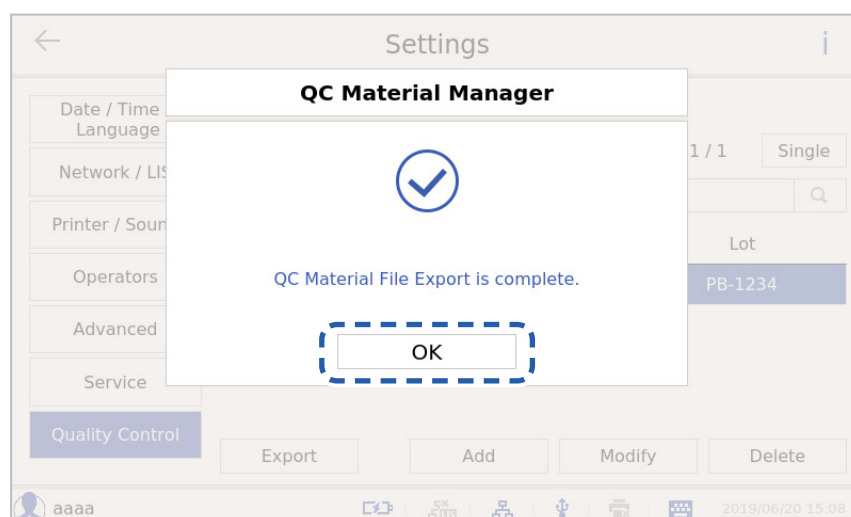
Connect a USB memory to the analyzer and select a QC data file.



Press the **[Export]** button.



A QC data file has been created in the USB memory. Press the **[OK]** button.



Add

Register new QC data. Press the **[Add]** button.

←

Settings

i

Date / Time / Language

Network / LIS

Printer / Sound

Operators

Advanced

Service

Quality Control

External Quality Control

QC Materials

All ☒ 1 / 1

Single

Filter Text

Name

Q

NameBrandLot

PB 3in1PBPB-1234

Export

Add

Modify

Delete

aaaa

2019/06/20 15:08

Enter information on Name, Brand, Lot and Expire and press the **[Add]** button.

QC Material Registration

Name *PB TnI

Brand *PB

Lot *PB-1234

Expire

<2020>

<6>

<20>

Analyte

Lv1

Low1

High1

Lv2

Low2

High2

Lv3

Low3

High3

Import...

Add

OK

Cancel

Select an analyte and enter concentrations for three levels.

Analyte Registration

Analyte *

TnI

Level 1:

Value1

0.08

Low1

0.06

High1

0.1

Level 2:

Value2

0.2

Low2

0.18

High2

0.22

Level 3:

Value3

1

Low3

0.8

High3

1.2

OK

Cancel

Click the **[OK]** button.

Analyte Registration

Analyte *

TnI

Level 1:

Value1

0.08

Low1

0.06

High1

0.1

Level 2:

Value2

0.2

Low2

0.18

High2

0.22

Level 3:

Value3

1

Low3

0.8

High3

1.2

OK

Cancel

If there is QC data provided by a supplier, connect a USB memory and press the **[Import]** button.

QC Material Registration

Name *

PB TnI

Brand *

PB

Lot *

PB-1234

Expire

<

2020

>

<

6

>

<

20

>

Analyte	Lv1	Low1	High1	Lv2	Low2	High2	Lv3	Low3	High3
TnI	0.080	0.060	0.100	0.200	0.180	0.220	1.000	0.800	1.200

Import...

Add

OK

Cancel

Register the entered QC data by pressing the **[OK]** button.

QC Material Registration

Name *

PB Tnl

Brand *

PB

Lot *

PB-1234

Expire

< 2020 >

< 6 >

< 20 >

Analyte	Lv1	Low1	High1	Lv2	Low2	High2	Lv3	Low3	High3
Tnl	0.080	0.060	0.100	0.200	0.180	0.220	1.000	0.800	1.200

Import...

Add

OK

Cancel

When the **[OK]** button is pressed, a confirmation message window will be displayed.
To register, press the **[OK]** button, or press the **[Cancel]** button if you wish to cancel registration.

QC Material Registration

Name *

Brand *

Expire

Analyte	Lv1
Tnl	0.080

QC Material Manager

?

Are you sure you want to register this material?

OK

Cancel

Import...

Add

OK

Cancel

Modify

You can select and modify QC data.

←

Settings

i

Date / Time / Language

Network / LIS

Printer / Sound

Operators

Advanced

Service

Quality Control

External Quality Control

QC Materials

All ☒ 0 / 2

Single

Filter Text

Name

Q

Name	Brand	Lot
PB 3in1	PB	PB-1234
PB TnI	PB	PB-1234

Export

Add

Modify

Delete

aaaa

2019/06/20 15:14

Press the **[Modify]** button.

←

Settings

i

Date / Time / Language

Network / LIS

Printer / Sound

Operators

Advanced

Service

Quality Control

External Quality Control

QC Materials

All ☒ 1 / 2

Single

Filter Text

Name

Q

Name	Brand	Lot
PB 3in1	PB	PB-1234
PB TnI	PB	PB-1234

Export

Add

Modify

Delete

aaaa

2019/06/20 15:14

Modify information on Name, Brand and Expire.

QC Material Modification

Name * PB Tnl

Brand * PB Lot * PB-1234

Expire < 2020 > < 6 > < 20 >

Analyte	Lv1	Low1	High1	Lv2	Low2	High2	Lv3	Low3	High3
Tnl	0.080	0.060	0.100	0.200	0.180	0.220	1.000	0.800	1.200

Add Modify Delete OK Cancel

To modify an analyte, select the analyte and press the **[Modify]** button.

QC Material Modification

Name * PB Tnl

Brand * PB Lot * PB-1234

Expire < 2020 > < 6 > < 20 >

Analyte	Lv1	Low1	High1	Lv2	Low2	High2	Lv3	Low3	High3
Tnl	0.080	0.060	0.100	0.200	0.180	0.220	1.000	0.800	1.200

Add **Modify** Delete OK Cancel

Change the concentrations for Level 1, 2 and 3 and press the **[Modify]** button.

Analyte Modification

Analyte * Tnl

Level 1:	Value1	0.080	Low1	0.060	High1	0.100
Level 2:	Value2	0.200	Low2	0.180	High2	0.220
Level 3:	Value3	1.000	Low3	0.800	High3	1.200

OK Cancel

Select an analyte you wish to delete and press the **[Delete]** button.

QC Material Modification

Name *

PB Tnl

Brand *

PB

Lot *

PB-1234

Expire

<2020>

<6>

<20>

Analyte	Lv1	Low1	High1	Lv2	Low2	High2	Lv3	Low3	High3
Tnl	0.080	0.060	0.100	0.200	0.180	0.220	1.000	0.800	1.200

Add

Modify

Delete

OK

Cancel

After modification is complete, press the **[OK]** button.

QC Material Modification

Name *

PB Tnl

Brand *

PB

Lot *

PB-1234

Expire

<2020>

<6>

<20>

Analyte	Lv1	Low1	High1	Lv2	Low2	High2	Lv3	Low3	High3
Tnl	0.080	0.060	0.100	0.200	0.180	0.220	1.000	0.800	1.200

Add

Modify

Delete

OK

Cancel

Delete

QC data can be deleted. Select QC data.

Settings

External Quality Control

QC Materials All ☒ 0 / 2 Single

Filter Text Name

Name	Brand	Lot
PB 3in1	PB	PB-1234
PB Tnl	PB	PB-1234

Export Add Modify Delete

aaaa 2019/06/20 15:15

Press the **[Delete]** button.

Settings

External Quality Control

QC Materials All ☒ 1 / 2 Single

Filter Text Name

Name	Brand	Lot
PB 3in1	PB	PB-1234
PB Tnl	PB	PB-1234

Export Add Modify Delete

aaaa 2019/06/20 15:16

◆ Information

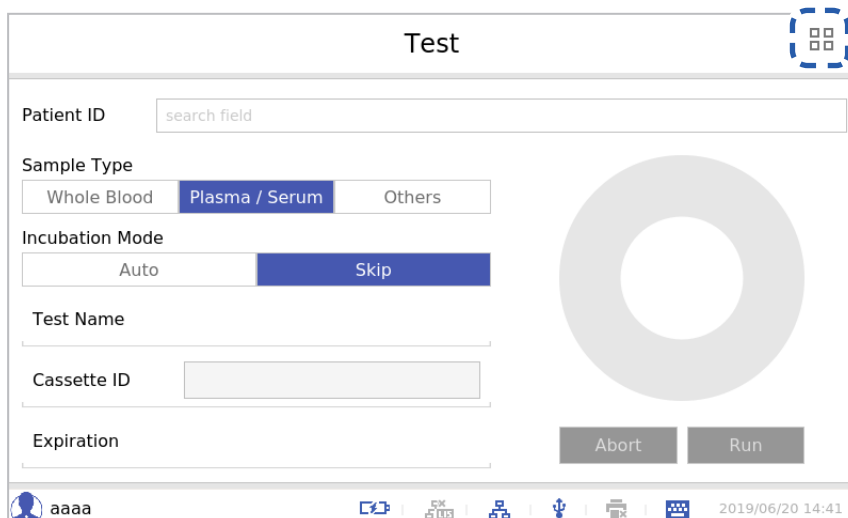
View and export program information and log information to a USB memory.

1. Enter ID and the password and press the **[Login]** button.



The login screen for the Exdia TRF Plus device. It features the title 'Exdia TRF Plus' at the top left and a power icon at the top right. Below the title are two user selection icons: a single person icon labeled 'aaaa' and a group of people icon labeled 'Others'. In the center, there is a dashed blue box containing a login form with fields for 'User ID' and 'Password', and a 'Login' button. At the bottom, there is a status bar with various icons (Wi-Fi, signal, battery, etc.) and the date/time '2019/06/20 14:41'.

2. Press the  button.

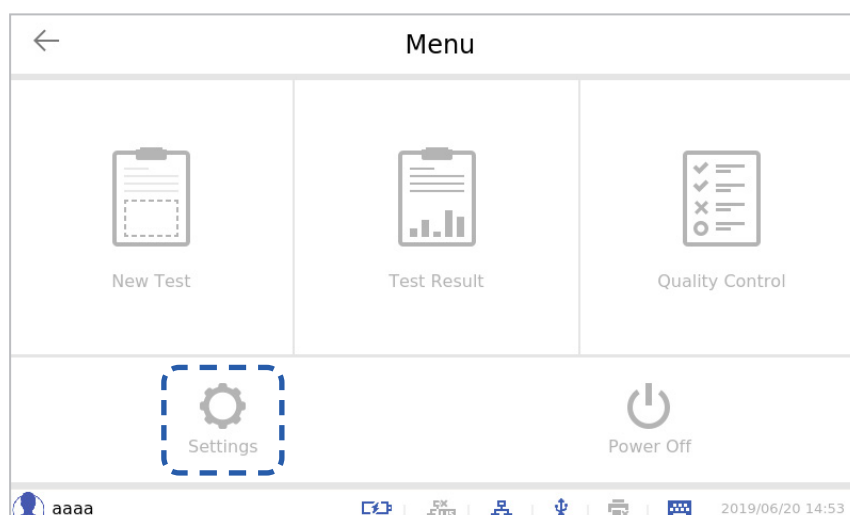


The 'Test' screen for the Exdia TRF Plus device. It has a title bar with the word 'Test' and a grid icon in the top right corner. The screen contains several input fields and buttons: 'Patient ID' with a search field, 'Sample Type' with buttons for 'Whole Blood', 'Plasma / Serum' (selected), and 'Others', 'Incubation Mode' with buttons for 'Auto' and 'Skip' (selected), 'Test Name' with a text field, 'Cassette ID' with a text field, and 'Expiration' with a text field. On the right side, there is a large circular graphic. At the bottom right, there are 'Abort' and 'Run' buttons. The bottom status bar shows the user 'aaaa', various icons, and the date/time '2019/06/20 14:41'.

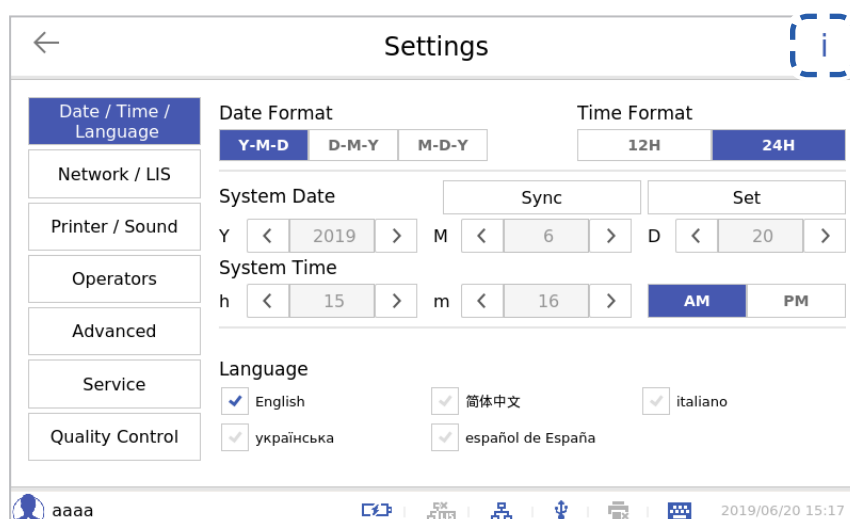


The analyzer to which this user manual refers may differ slightly from an actual analyzer according to the customer's requirements.

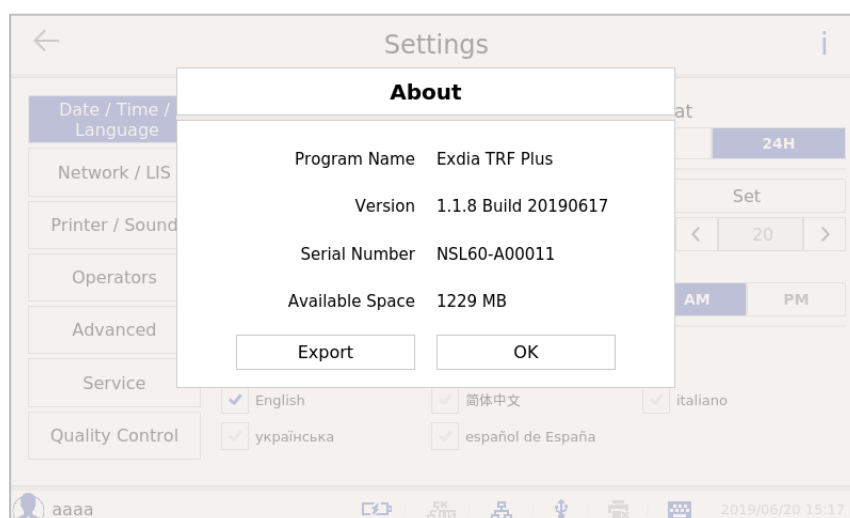
3. Press the **[Setting]** button.



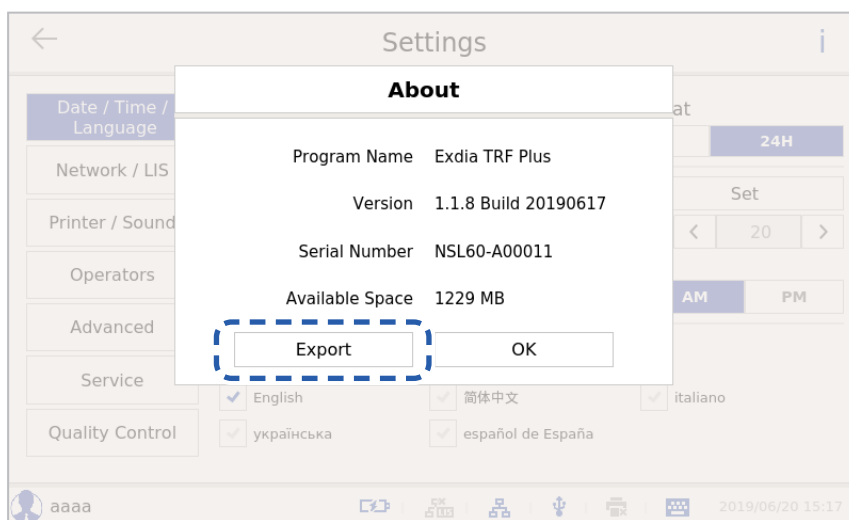
4. Press the **i** button.



5. Check the program information.



6. To export log information to a USB memory, connect a USB memory to the analyzer and press the **[Export Log]** button.



Maintenance

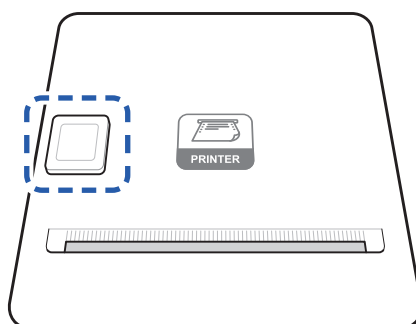
Please check the instruction to replace printing papers and the maintenance of the printer.

◆ Replace Printing Paper

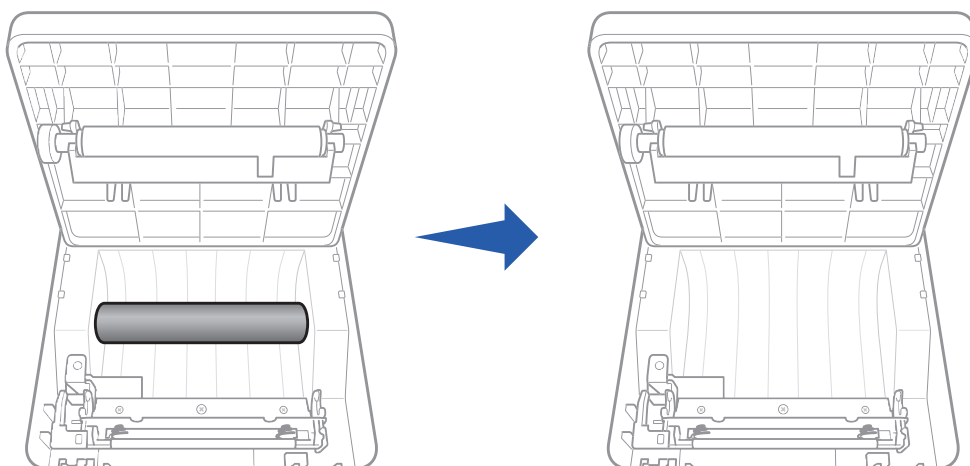
Print a test result using the thermal printer in the Exdia TRF Plus. A roll of printing paper is included in the printer when the analyzer is purchased. Replace it with a new roll of printing paper according to the following method.

Use a roll of thermal printing paper 57 mm in width and 30 mm in external diameter when replacing the roll of printing paper.

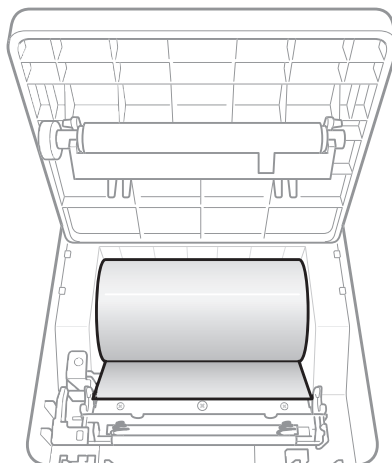
1. Open the printer cover by pressing the printer cover button located at the top of the analyzer.



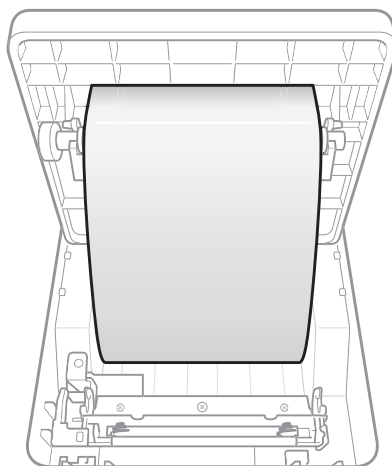
2. Remove the remaining roll.



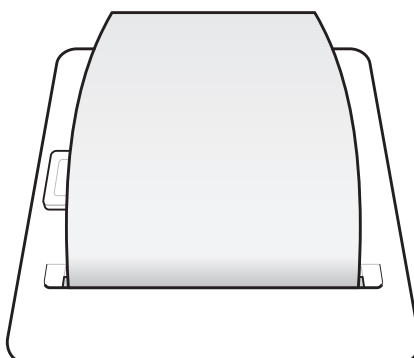
- 3.** Fit a new roll of printing paper.



- 4.** Position the end of the printing paper in the printing paper outlet.



- 5.** Close the printer cover.



◆ Maintenance

The maintenance schedule should be set according to the following schedule.

Item	Everyday	Every week	Every month	Quarterly	As needed
Quality Control of the Analyzer	●				
Cleaning of the cassette slot		●			
Comparison with the previous IQC data			●		
Cleaning of the temperature sensor				●	
Replacement of the Li-Po battery					●
Surface cleaning of the analyzer					●
Data backup					●

■ Cleaning

If the cassette slot is contaminated, wipe the contaminated area using a soft cloth or a cotton swab.



Caution

- Do not wipe using alkaline detergent or an organic solvent (thinner, acetone, etc.).
- Turn off the analyzer and disconnect the external power supply before cleaning.

■ Disposal



The Exdia TRF Plus should be disposed of according to the regulations on the disposal of electronic and electrical equipment.



Caution

Send the Exdia TRF Plus to Precision Biosensor Inc. for proper disposal.
If you dispose the analyzer onsite, dispose it according to local regulations.

■ Transportation and Storage

**Caution**

- Transport the analyzer after removing the cassette or the QR card from the cassette slot.
- Store the analyzer in a dry place away from direct sunlight.

■ Repair

The operator should not directly repair the Exdia TRF Plus. If you need technical repairs, be sure to contact the Customer Support Team (support@precision-bio.com).

◆ Troubleshooting

Symptom	Cause	Solution
Nothing is displayed on the screen. (The status indication LED is off.)	Abnormal input power	Check if the external power supply is correct.
	Abnormal power cable connection	Separate the power cable from the electrical outlet and then connect it again.
	Abnormal AC adaptor	Contact the Customer Support Team.
	Abnormal power cable	Contact the Customer Support Team.
	Power button not pressed	Press the Power button to turn on the analyzer.
A specific screen is frozen. (The status indication LED is on.)	Software failure	Press the Forced Termination button and reboot the computer.
	Software damage	Contact the Customer Support Team.
No touch recognition	Abnormal touch recognition	Turn off the product, and then turn it on 10 seconds later. If the problem persists, contact the Customer Support Team.
USB memory cannot be recognized. (Abnormal recognition)	Abnormal USB port	Separate the USB memory from the port and connect it to another port. Reboot the analyzer and try again. If the problem persists, contact the Customer Support Team.
	Abnormal USB connection	Check if the USB memory is connected to the USB port.
No built-in printer operation	No printing paper	Check if there is any remaining printing paper. If no printing paper remains, replace the printing paper according to "Replace Printing Paper".
	Printing paper jam	Check if the printing paper is jammed. If it is jammed, replace the printing paper according to "Maintenance - Replace Printing Paper".
	Built-in printer failure	Contact the Customer Support Team.

Symptom	Cause	Solution
No external printer operation	Status of supported printer	Check Page 77 (Printer/Sound) and check if it is a supported printer.
	Printer setting	Go to Settings and check if Local is set for the printer setting.
	Power supply to the printer	Check if the power supply is connected to the printer normally.
	Abnormal USB port	Separate the USB memory from the port and connect it to another port. If the problem persists, contact the Customer Support Team.
	Abnormal USB connection	Check if the printer is connected to the USB port.
No email/LIS transmission	Abnormal network settings	Check the network setting in Settings.
	Abnormal network	Check the network system with the network administrator for the place of installation.
	Abnormal LAN cable connection	Check if the LAN cable is connected to the analyzer.
QR code cannot be read.	The QR card is inserted in reverse.	Checking the direction, insert the QR card into the cassette slot and test again. If the problem persists, contact the Customer Support Team.
The cassette barcode cannot be read.	Check the cassette position.	Check the cassette position and test again. If the problem persists, contact the Customer Support Team.
The cassette slot won't shut.	Check the cassette position.	Check the cassette position and close the cassette slot again. If the problem persists, contact the Customer Support Team.
The cassette slot won't open.	The cassette is jammed internally.	Contact the Customer Support Team.



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