Leap-Count 100A Bright Field Cell Counter

NB-12-0064A

Leap-Count 100A Bright Field Cell Counter

#Cat: NB-12-0064A

Operation Manual



Welcome to use Leap-Count 100A Bright Field Cell Counter

Thank you for using our Cell Counter.
In order to use the instrument properly, please read this manual carefully before using.
Keep it for later use when you meet with difficulties. This manual provides you with convenient instructions for the use and maintenance of the Cell Counter. Including safety, installation, use, maintenance, repair and other aspects of the content. Reading this book alone does not authorize individuals to have the ability to use this product.

Opening Check

Please check the Instrument and Accessories according to the packing list when you first open the packing case. If anything wrong or missing, please contact the distributor or the manufacturer.

Version Modification Record

Version No.	Date	Description
V 1.0	2024 / 07 / 01	Initial release
V2.0	2026 / 04 / 09	Update release

Important information

Users need to have a complete understanding of how the instrument works before they can safely operate it. Please read this manual carefully before operating the instrument.



Any improper operation may cause injured or electric shock. Please read the manual carefully and operate safely according to the guidelines.



This instrument intended to use in Scientific Research only!

1 Security

In all processes of operating, maintaining, and repairing this instrument, the following basic safety precautions must be followed. If these measures or warnings indicated elsewhere in this manual are not followed, it may affect the protection provided by the instrument and the expected range of use of the instrument.



This instrument is a common device in accordance with GB4793.1 standard. This instrument is a product for indoor use.



Before using the device, read the Manual carefully. These units are designed for use in laboratory environments. The device must be used by skilled personnel with the appropriate training.



It is strictly forbidden to disassemble the instrument except the parts allowed in the user manual.
In case any injury or out of warranty.
If service required, please contact our company or local distributor.



- Before powering on, please make sure the voltage of the power supply is consistent with the required voltage. And make sure the rated load of the power outlet is not less than required by the instrument.
- If the power cord is damaged, must replace it with a same type and specification. Do not cover anything on the power cord when using. Do not place the power cord to where people are walking.

Biological Pollution



Note: There is a risk of biological contamination in some aspects of the normal use of this instrument, and the following matters should be noted when using:



All test samples, quality control samples, standard samples, etc., should be considered infectious, and the personnel using these reagents should have relevant qualifications; Wear gloves when touching; Any part that has come into contact with the test sample should be considered contagious and should be handled with gloves.

Other Precautions



The instrument should be placed in low humidity, less dust, and away from water sources and avoid direct sunlight and strong light sources, indoor ventilation should be good, no corrosive gas or strong magnetic field interference, away from heating, stove and other heat sources. Do not place the instrument in a humid or dusty place.



When stop working, turn off the power. When the instrument is not used for a long time, the power cord should be unplugged. After the instrument is cooled to room temperature, cover the instrument with a soft cloth or plastic paper to prevent dust from entering. After the instrument stops working, be sure to remove the counting plate from the slot; if the instrument will not be used for an extended period, the counting plate must also be removed and stored properly.



In the following cases, the power cord of the instrument should be immediately removed from the power socket, and contact the supplier or ask professional maintenance personnel to deal with:

- The instrument is rained or watered.
- The instrument is not working properly, especially if any abnormal sounds or smells appear.
- Instrument dropped or case damaged.
- The function of the instrument has changed significantly.

Contents

1 Introduction..... 1

1.1 Features.....1

2 Specification..... 2

2.1 Product Performance Specifications..... 2

3 Instrument Composition..... 3

3.1 Main Structure of the Instrument..... 3

4 Installation of Instrument and Software.....5

4.1 Instrument Installation.....5

4.1.1 Pre-Installation Inspection.....5

4.1.2 Installation Conditions Confirmation.....5

4.1.3 Instrument Handling and Installation..... 5

4.2 Software Setup..... 6

4.2.1 Software Setup Environment.....6

4.2.2 Software Setup Steps..... 6

5 Instrument Operating Instructions..... 12

5.1 Connect Instrument.....12

5.2 Main Interface.....14

5.2.1 Status Bar.....14

5.2.2 Top Navigation.....14

5.2.3 Operation Area.....15

5.3 Start the Test.....15

5.3.1 Pre-Run Settings.....15

5.3.2 Run Test.....16

5.3.3 Run Completed.....16

5.3.4 Run Again.....18

5.4 Data..... 18

5.5 Settings.....19
5.5.1 General.....20
5.5.2 Test Type..... 21
5.5.3 Cell Library..... 24
5.5.4 Accounts Management..... 25
5.5.5 Logs.....28
5.5.6 Recycle..... 28
5.5.7 AI setting.....29
5.6 User Authority..... 30
6 Maintenance and Care, Storage, Transportation..... 32
6.1 Maintenance and Care.....32
6.2 Storage and Transportation.....32
7 Fault Analysis and Solutions.....33
8 Abbreviations and Marks.....35
8.1 Abbreviations.....35
8.2 Marks.....35

1 Introduction

Leap-Count 100A cell counter is an instrument used for imaging and counting cell suspension samples to determine cell viability. Cell viability can be determined by the principle of cell membrane of dead cells using trypan blue dye, and the imaging of dead cells after staining appears black.

1.1 Features

- PC software control makes operation more convenient and user-friendly.
- Convenient interaction, simple operation, optimized interface, user-friendly experience, intuitive and easy to use.
- Chinese and English operating systems.
- Powerful analysis function, unlabeled cell analysis, trypan blue viability analysis, cell growth curve.
- Automatic/manual focusing to meet user needs and detect quickly.
- LED light source maximizes the lifespan of the light source.
- Multiple data export formats for convenient data transfer and processing.
- Only a small amount of sample is needed to complete the overall analysis of the sample.

2 Specification

2.1 Product Performance Specifications

Instrument Performance Specifications:

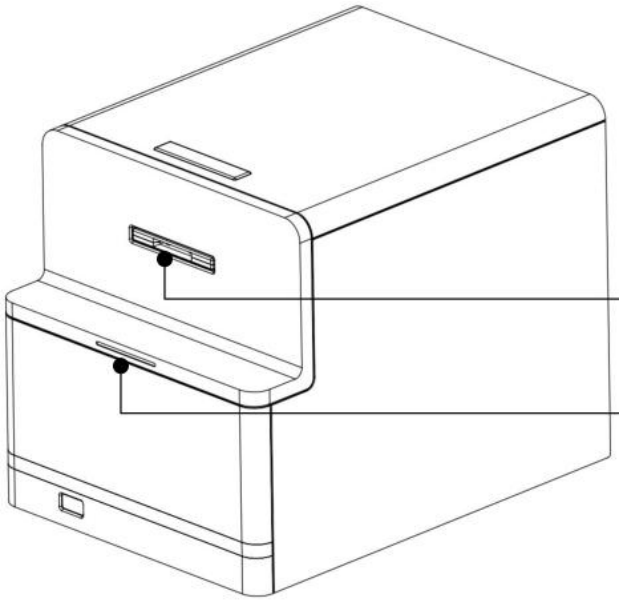
Product name	**Cell counter**
Model	Leap-Count 100A
Measuring diameter range	3-60µm
Concentration range	$1x10^4$-$1x10^8$/mL
Detect optimal cell concentration range	$1x10^5$-$1x10^7$/mL
Sample detection volume	1
Analysis time	≤2s
Cell viability detection range	0-100%
Required sample volume	10µL
Objective magnification	3 x
Imaging element	6 megapixel CMOS camera
Working temperature	10-40°C
Working humidity	<80%
Consumables	Cell counting slide, 0.4 % trypan blue
Data export format	PDF, XLS, TIFF, PNG, JPG
Operating system	Windows 10 and above
Instrument port	USB3.0 B type port
Dimension (WxDxH)	196×268×216mm
Power supply	100-240V 50/60Hz 100VA
Weight	5kg

3 Instrument Composition

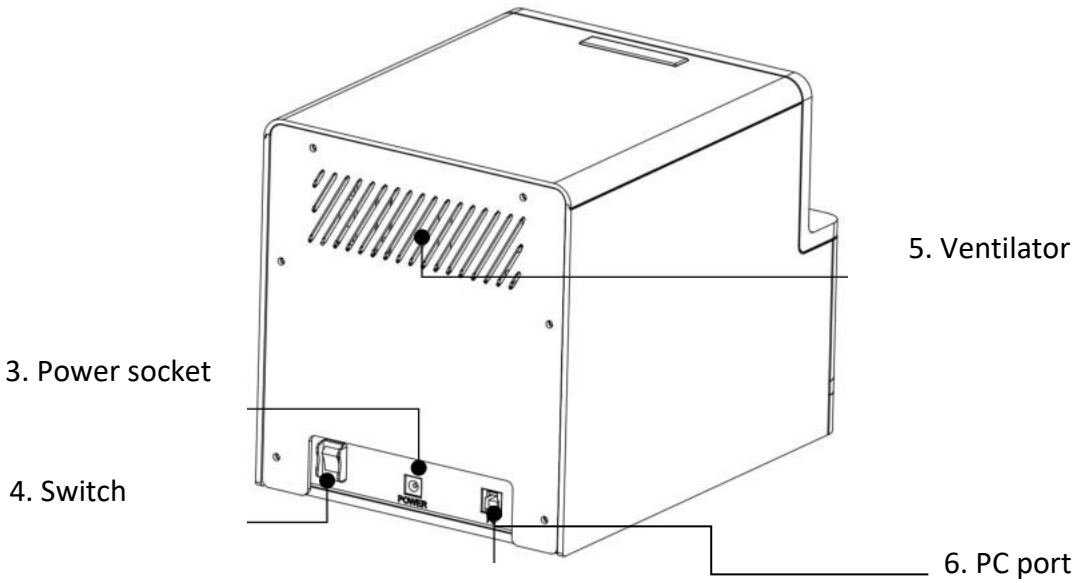
3.1 Main Structure of the Instrument

This chapter mainly introduces structures and preparation work. Please read this chapter carefully before first using.

Structure Figure 1:



Structure Figure 2:



1. Sampling port: Cell counting slide insertion port.
2. Indicator: When the instrument is in working condition, the indicator light is always on; when the instrument is turned off, the indicator light is off.
3. Power socket: Power cable socket, used for instrument power supply.
4. Switch: Power switch, used for instrument start up.
5. Ventilator: Used for ventilation and heat dissipation of internal components of instruments.
6. PC port: Used for connecting instruments to PC computers.

4 Installation of Instrument and Software

4.1 Instrument Installation

4.1.1 Pre-Installation Inspection

All Leap-Count 100A Cell Counters have been strictly inspected by the company before shipping. When you receive the instrument, please check it carefully before unpacking for the following damages.

①The package inverted or deformed;

②The package has an obvious stains of water;

③The package has marks of impact;

④The package has been opened.

If it have any damage, please contact us immediately or notify local agent.

If the outer packing is in good condition, please open the packing case in the presence of agents and staff and check after unpacking:

⑤Check all accessories according to the packing list;

⑥Check instrument appearance if there is cracks, damage or deformation.

4.1.2 Installation Conditions Confirmation

Instrument installation environment requirements:

①Space: A dry, clean, and horizontal workbench.

②Environment:

a. The ambient air is clean and free of corrosive vapors, fumes and dust.

b. Ambient temperature between 10°C and 40°C.

c. Humidity must not be high to ensure that condensation does not occur (relative humidity between 20% and 80%, no condensation).

Note: Do not operate the instrument in a destructive gas-liquid environment.

4.1.3 Instrument Handling and Installation

①Unpack the instrument shipping package.

②Place the instrument and packaging lightly on the operating site, open the carton, and then take out the instrument and place it on the operating platform.

Note: Except as specifically designated in the description, do not artificially loosen any other screws or parts, as this may cause damage to the instrument and void the instrument warranty.

③Place the "I/O" switch on the back of the instrument in the "O" position. Take out the power cable and plug it into the socket at the back of the instrument, then connect the other end of the power cable to the AC100~240V power supply.

④Turn on the switch, the power indicator light will turn on and can be operated after completion.

Warning: Do not operate the instrument connected to an ungrounded electrical outlet.

4.2 Software Setup

4.2.1 Software Setup Environment

The operating system requires Windows 10 and above, a 64 bit operating system.



Figure 4-1 Operating System Requirement

4.2.2 Software Setup Steps

1. Double click to install software program. 

2. Enter the setup wizard interface and click "Next" in figure 4-2.



Figure 4-2 Setup Wizard

3. Click on "Next" in figure 4-3.

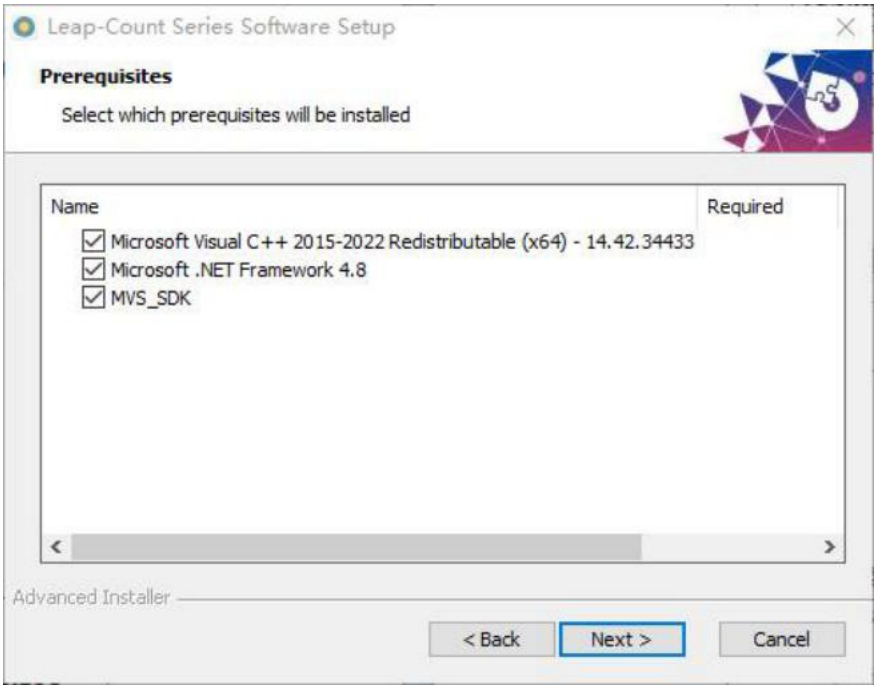


Figure 4-3 Operating Environment

4. Wait for the progress bar in figure 4-4 to finish reading.

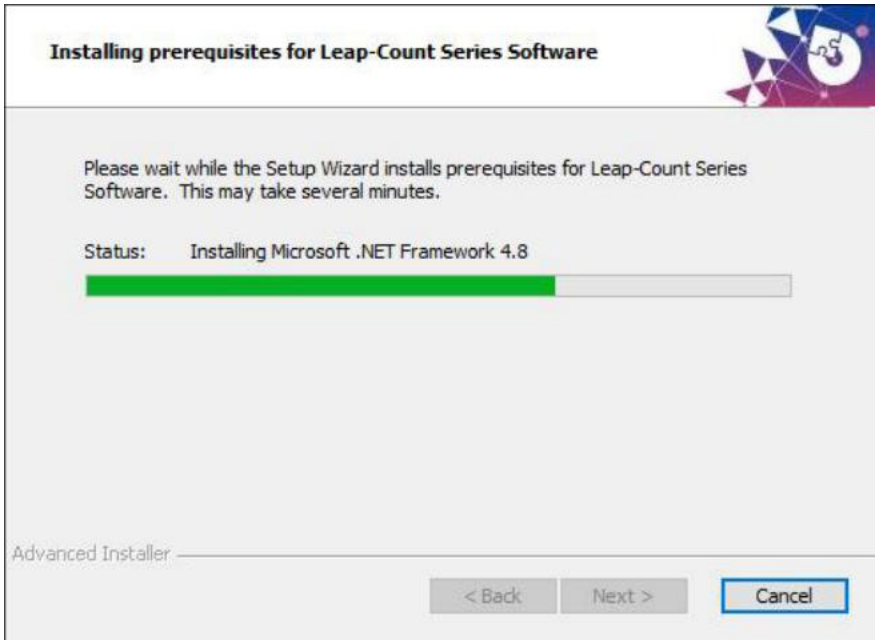


Figure 4-4 Setup Status

5. At the software setup stage, click "Next" in figure 4-5.



Figure 4-5 Software Setup

6.Select the option to accept the terms of the license agreement, then click "Next" in Figure 4-6.

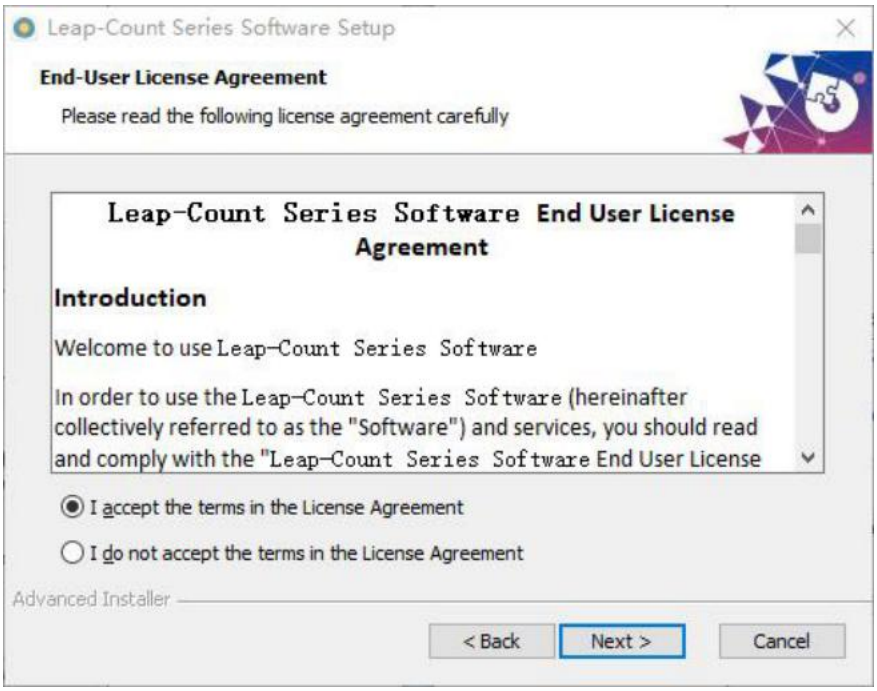


Figure 4-6 License Agreement Terms

7 Select installation folder and click "Next" in figure 4-7.

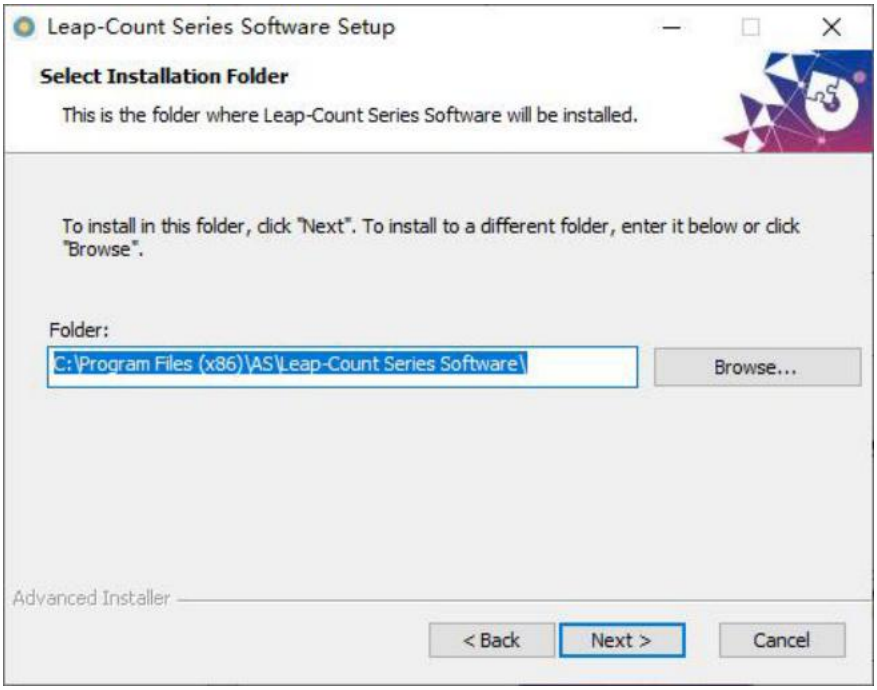


Figure 4-7 Installation Folder Selection

8. Click on "Install" in figure 4-8 to confirm installation.

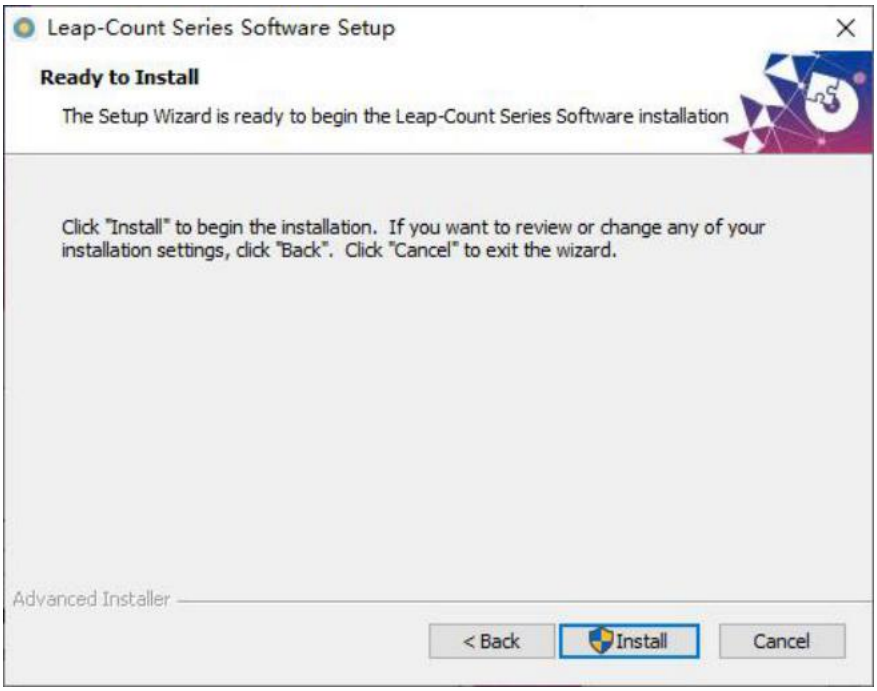


Figure 4-8 Confirm Installation

9. Wait for the progress bar to read out as in figure 4-9.

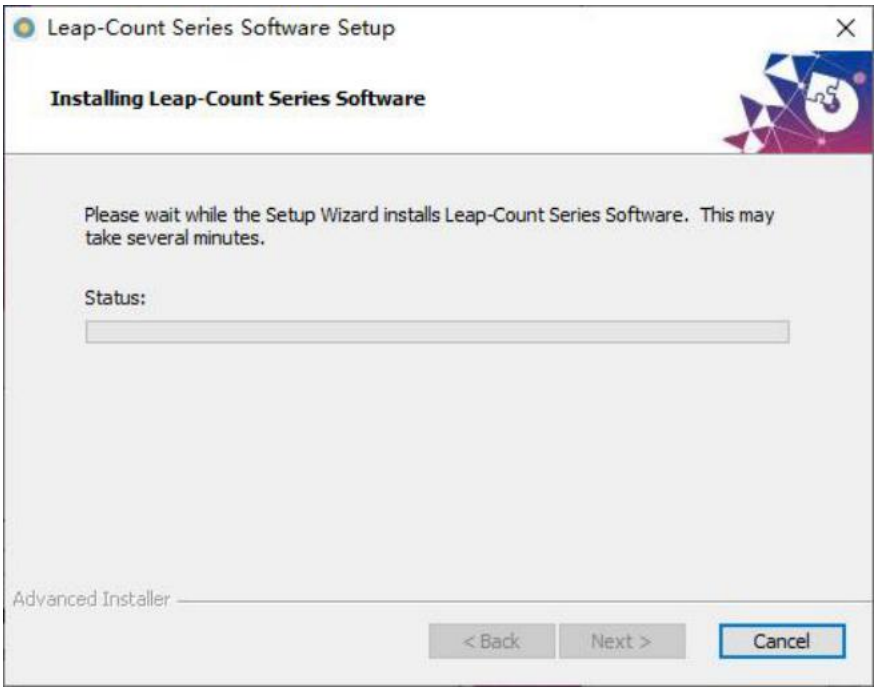


Figure 4-9 Setup Status

10. Click "Finish" in figure 4-10 to complete the installation.



Figure 4-10 Installation Completed

11. After installation, the desktop icon is as shown in the figure 

. Double click to run the software.

5 Instrument Operating Instructions

5.1 Connect Instrument

1. After completing the software installation, use a USB cable as shown in figure 5-1 to connect the USB3.0-B type port to the "PC port" of the instrument, paying attention to the matching shape of the square port for insertion. Then connect the USB3.0-A port to the PC computer. Then connect the instrument power supply, turn on the power switch of the instrument, and the instrument will start with the indicator light on.

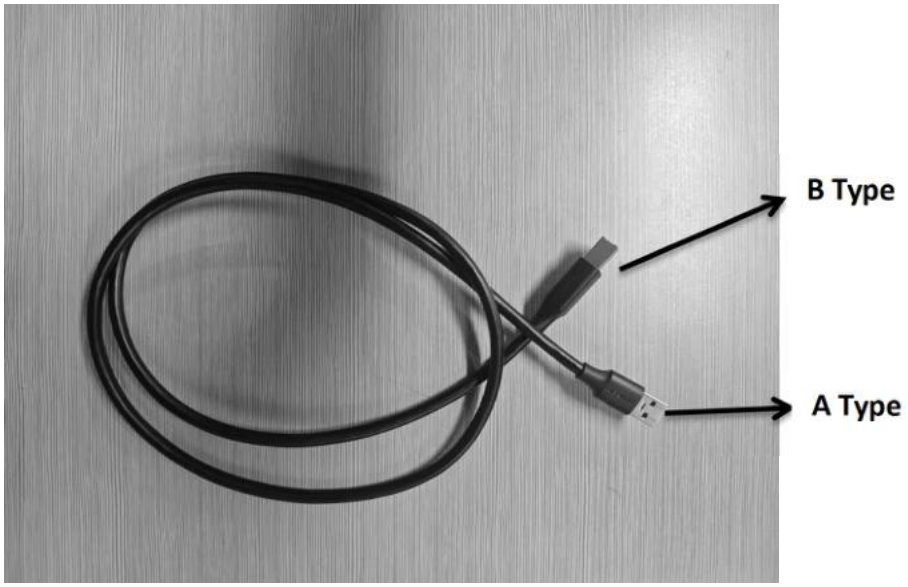


Figure 5-1 Connection Cable

2. After turning on the instrument, find the software icon 

on the PC desktop, double-click to run the software, and the instrument will automatically connect to the PC software. If a fault alarm occurs, please refer to Chapter 7 Fault Analysis and Solutions.



Figure 5-2 Self Checking Interface

3. After completing the self checking, enter the user login interface, "Admin" is the administrator account, and its default password is "0000". Please note that the input is case-sensitive. If the software is already connected to the instrument with a data cable during start up, the instrument will be automatically connected. The connection status is divided into two parts: successful instrument communication connection and successful camera communication connection, which indicates a complete connection.

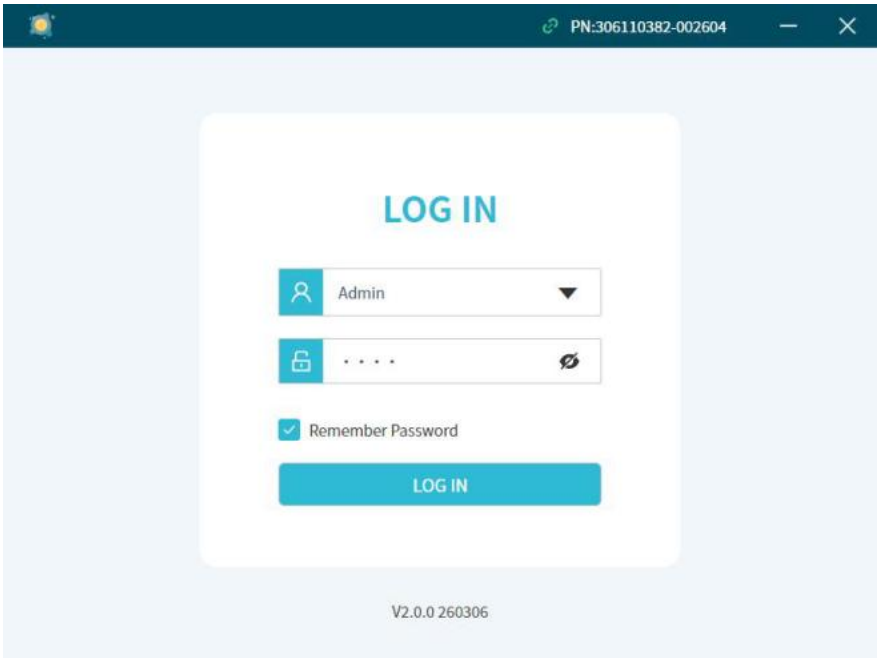


Figure 5-3 Login Interface

Note: Please keep the Admin password, or contact the manufacturer or your distributor when forgotten the password of Admin to avoid unnecessary damage.

5.2 Main Interface

After entering the user name Admin and default password 0000 on the login interface, the main interface of the software is shown in the following figure. The main interface mainly displays the test types and running tests. There are two fixed types (Cell Count, Trypan Blue) on the main interface. To conduct tests using instruments, you can directly click on the needed test card on the main interface (if you need to create/edit an test type, you can do so in the settings interface-test type interface).

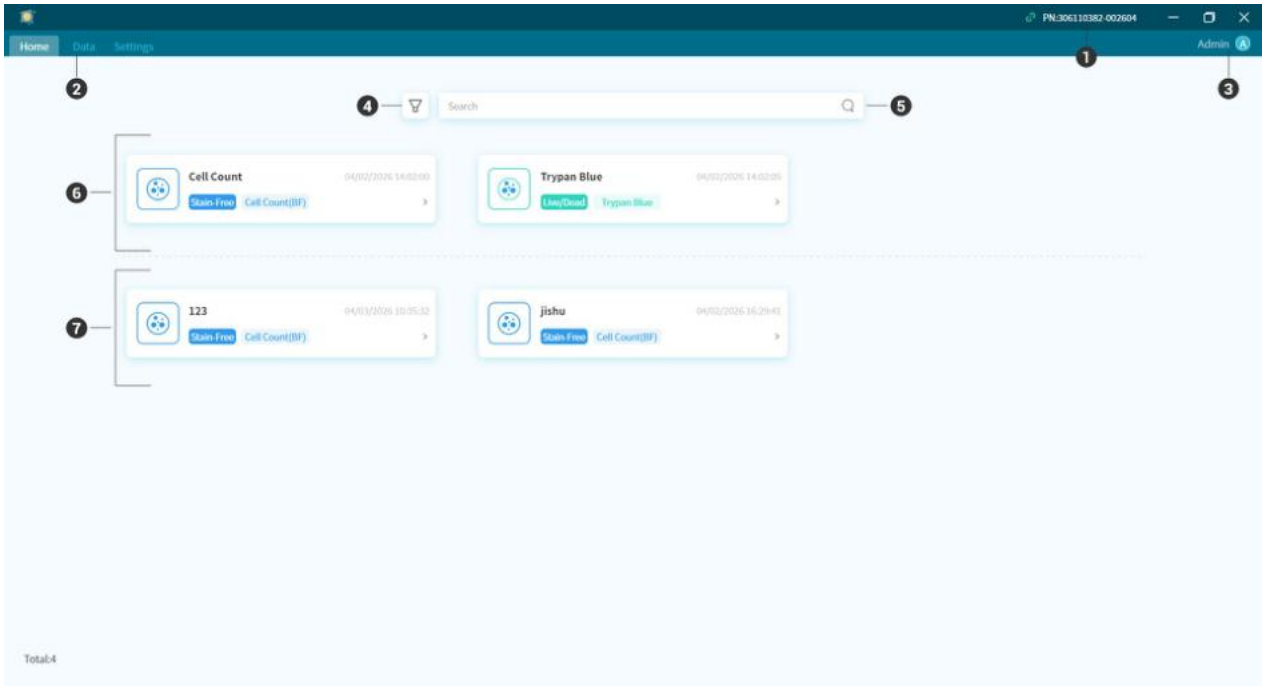


Figure 5-4 Main Interface

5.2.1 Status Bar

The status bar displays the connection status of the instrument (not connected , Communication disconnected ,camera disconnected ,connected ).

5.2.2 Top Navigation

The top navigation displays the main functional modules, namely home, data, settings, and account. At the same time, the navigation bar also displays the time in real-time and instrument PN number.

5.2.3 Operation Area

It is mainly the operating area for the main functions and content of the software, and also the main usage area.

①Connection of instrument buttons, connection status, and instrument PN display
②Navigation bar switching
③Account display
④Experiment filter button
⑤Search box
⑥Preset experiment types
⑦User-created experiment types

5.3 Start the Test

5.3.1 Pre-Run Settings

In the main interface, click on the test type and insert a sample strip. After inserting the sample strip, enter the pre-run settings interface, as shown in figure 5-5. Input the basic information of this test in this interface,Select or create a new cell type, and manually adjust brightness and focus to achieve the desired effect. You can also save the current experiment type as a new one, and the saved experiment type will be available for viewing on the homepage after successful saving.

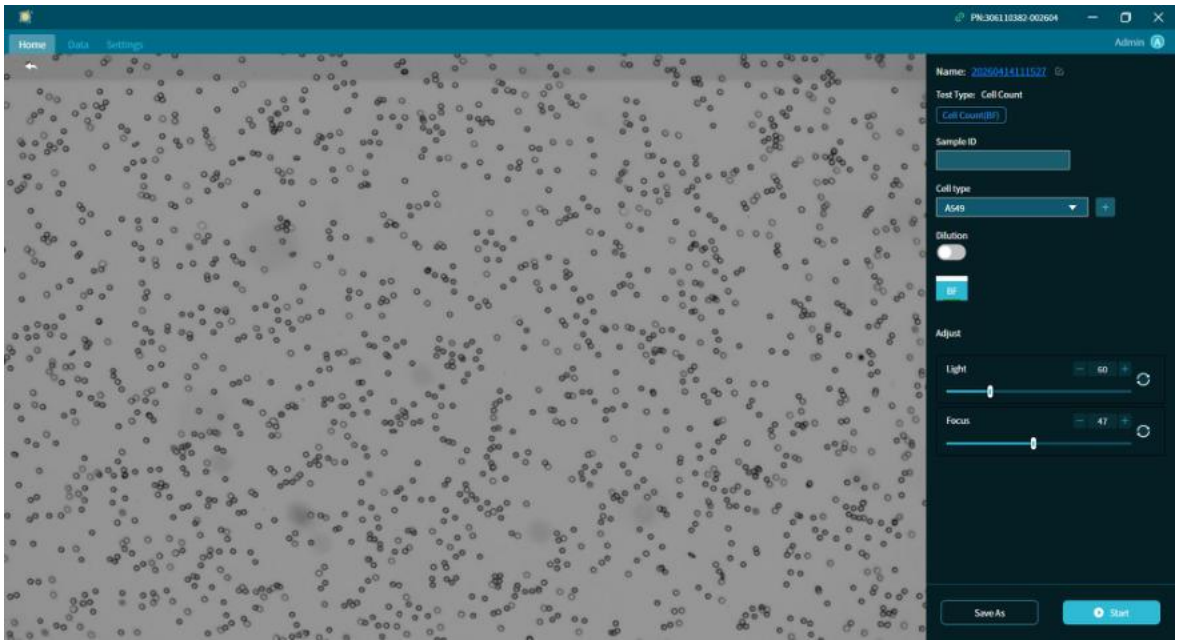


Figure 5-5 Start Running Interface

5.3.2 Run Test

Parameter settings are complete, click the "Start" button to run the test.

5.3.3 Run Completed

After the run is completed, it will automatically jump to the run completed interface, as shown in figure 5-6. All running parameters and images are automatically saved. The run completed interface is divided into three parts: information display, result display, and function operation.

1. Information display: Mainly including the test name, sample ID, and dilution ratio.
2. Result display: The test data results and cell images provide a more direct view of the test results.
3. Function operation: Test run again, export report, calculator, parameter adjustment, diameter distribution graph, and other functions.
4. The left cell image has a zoom function, which can be enlarged up to 100 times, and the current magnification is displayed in the lower left corner after enlargement.

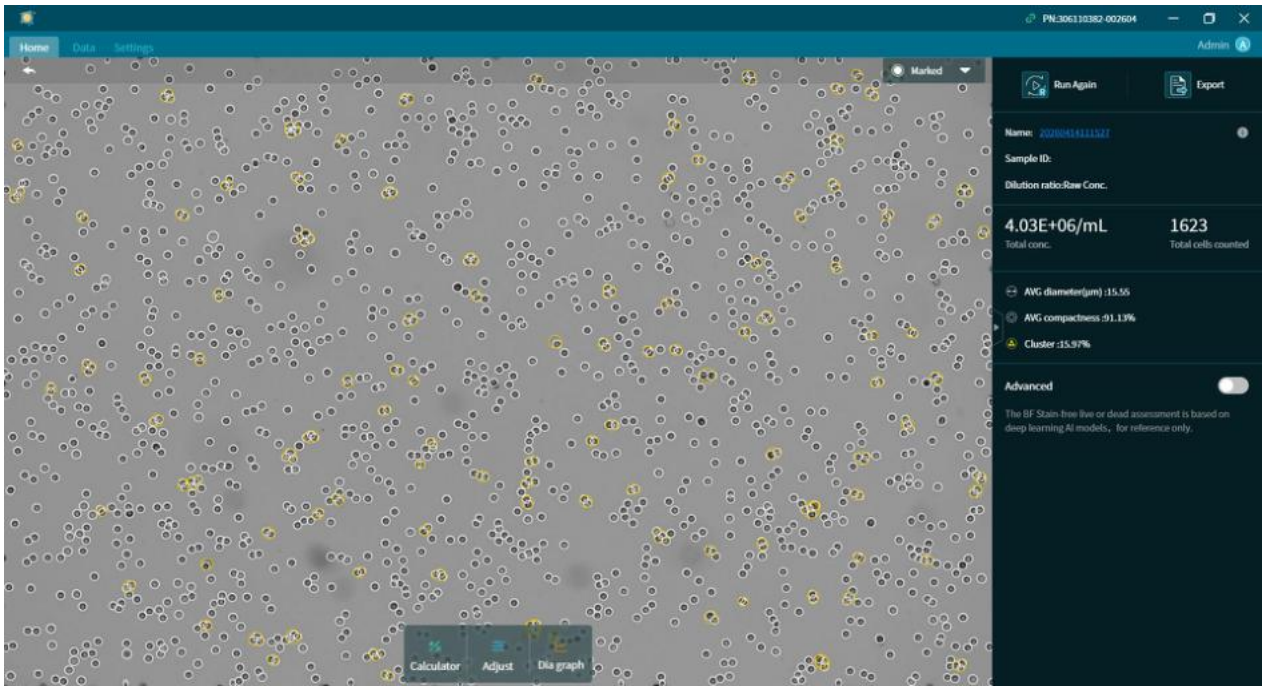


Figure 5-6 Run Completed Interface

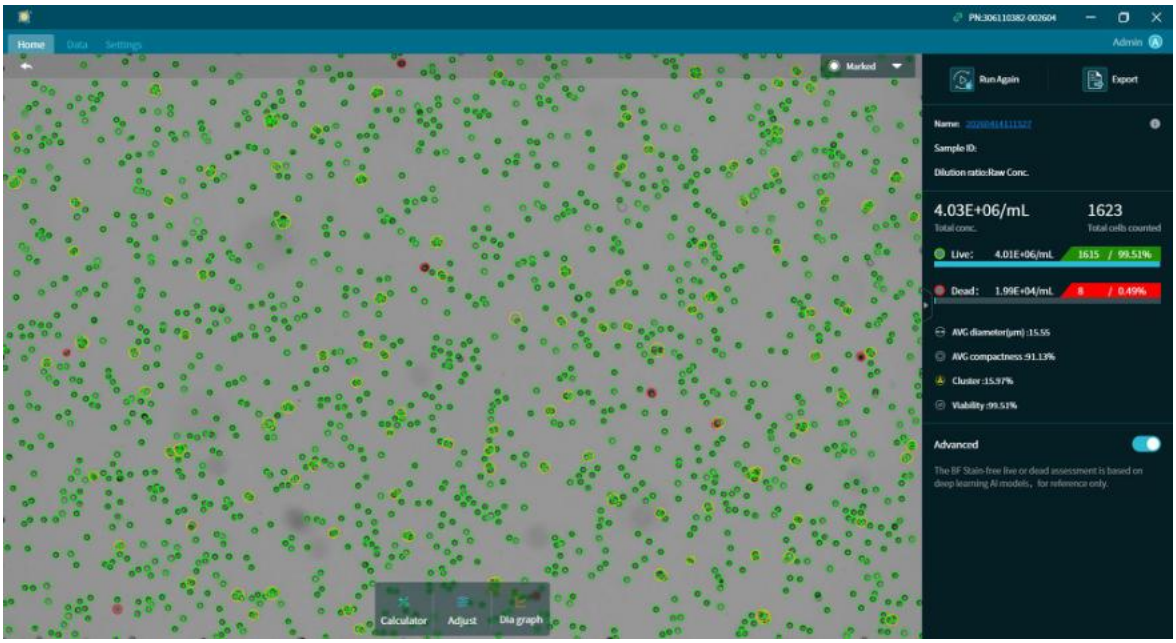
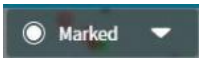
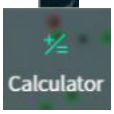
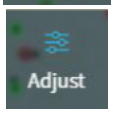


Figure 5-7 Operation Completion Interface - Advanced Switch Enabled

*Please note that the duration of cell counting is related to the performance of the PC computer.

The button functions of this interface can refer to table 5-1 below:

Table 5-1 Button Functions of Run Completed Interface

Name	Type	Function
	Button	Run again button, click on the pop-up window of running again protocol name
	Button	Export the report, click on the pop-up window of the export report format and content selection
	Drop down box	When selecting the checkbox, the cell count of the selected channel will be circled
	Button	Click to fold the information bar on the right side of the interface
	Button	Click to open the calculator interface, mainly used for calculating cell concentration
	Button	Click to open the parameter adjustment interface
	Button	Click to open the diameter distribution graph interface

5.3.4 Run Again

If the next test is the same as this test and the setup parameters, you can replace the sample strip and click the “Run Again” button to pop up a new test information pop-up window. The name can also be changed. After filling in the information, click the start button to start running without returning to the main interface to reset.

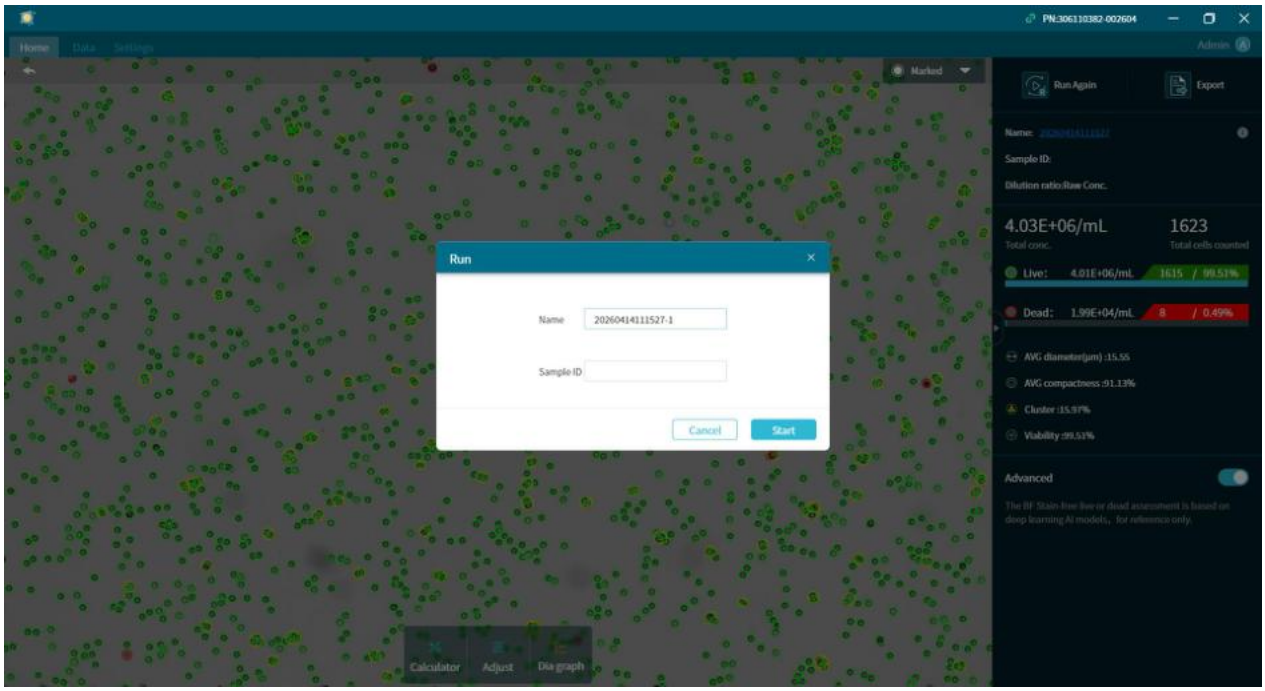


Figure 5-8 Run Again Pop-Up Window

5.4 Data

The data file refers to the test records that have been run, which mainly include the test name, test type, cell type, total concentration, tester, and time.

Click on the icon 

on the main interface to enter the data interface, which displays all the test data results in the current instrument. You can perform operations such as searching, calculating, reanalyzing, generating growth curves, exporting reports, and deleting, as shown in the following figure 5-9.

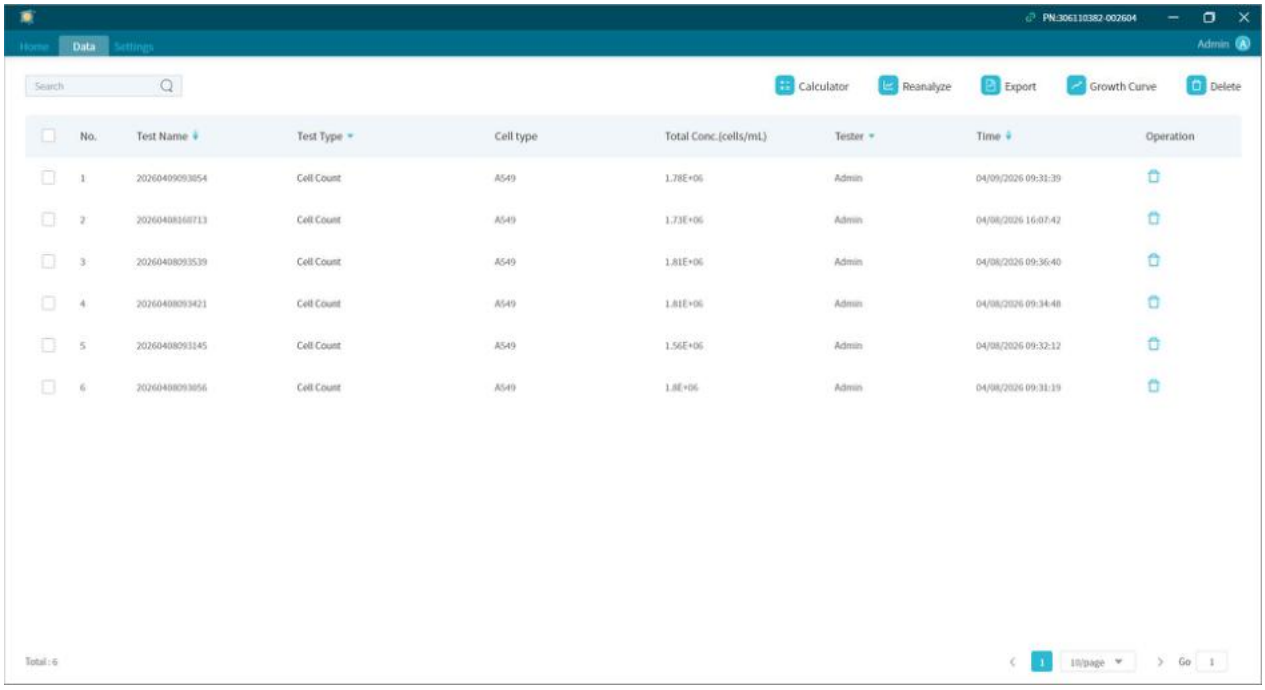


Figure 5-9 Data Interface

The button functions of this interface can refer to table 5-2 below:

Table 5-2 Data Interface Button Function

Name	Type	Function
	Button	Pop up calculator
	Button	Enter the data reanalysis interface
	Button	Pop up the report generation pop-up window
	Button	Enter the growth curve interface
	Button	Delete data

5.5 Settings

Click on settings on the main interface to enter the settings interface, which includes general, upgrade, test type, cell library, logs, recycle, and help, as shown in the following figure 5-10.

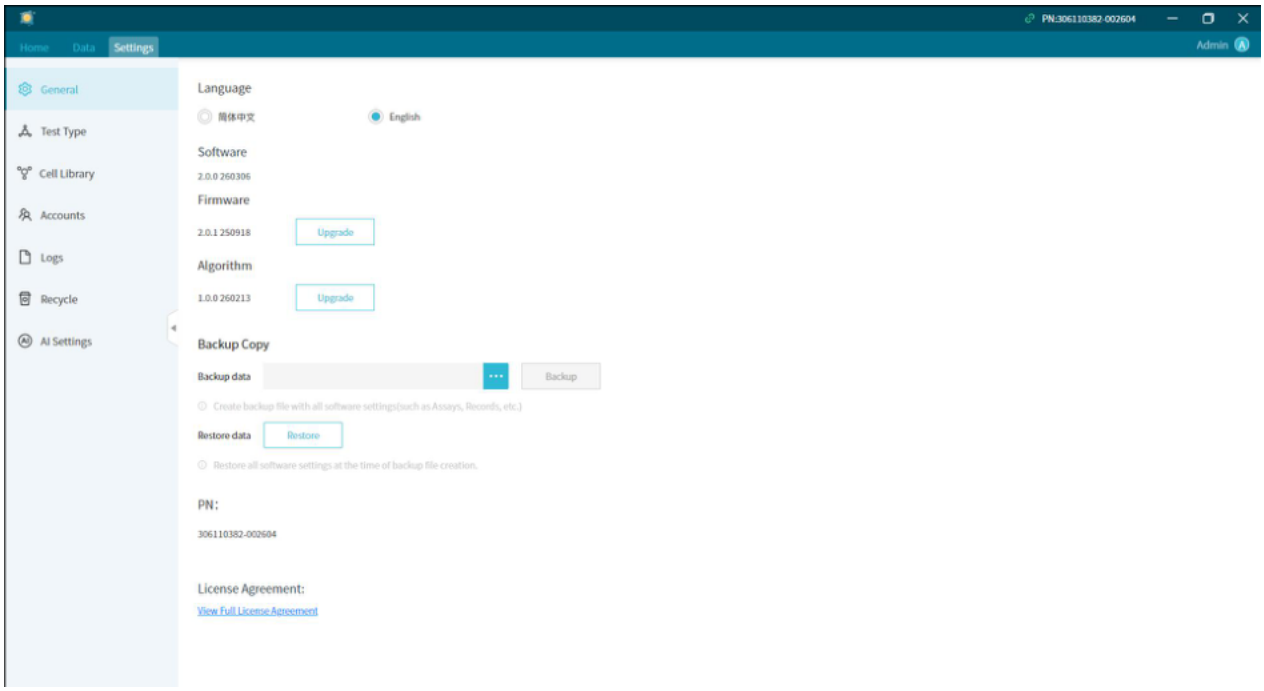


Figure 5-10 Settings Interface

5.5.1 General

The general settings mainly involve setting the parameters of the instrument, including language, time, and PN, as shown in the following figure.

1. Language: Can set in Chinese or English;
2.Software Version: Displays the current software version.
3.Hardware: Displays the current hardware version and allows for upgrades.
4.Algorithm: Displays the current algorithm version and allows for upgrades.
5.Backup: Select a path to back up data.
6.Restore: Click to select a specified database for data restoration.
7.PN: View PN number.License
8.Agreement: Click to view the complete license agreement.

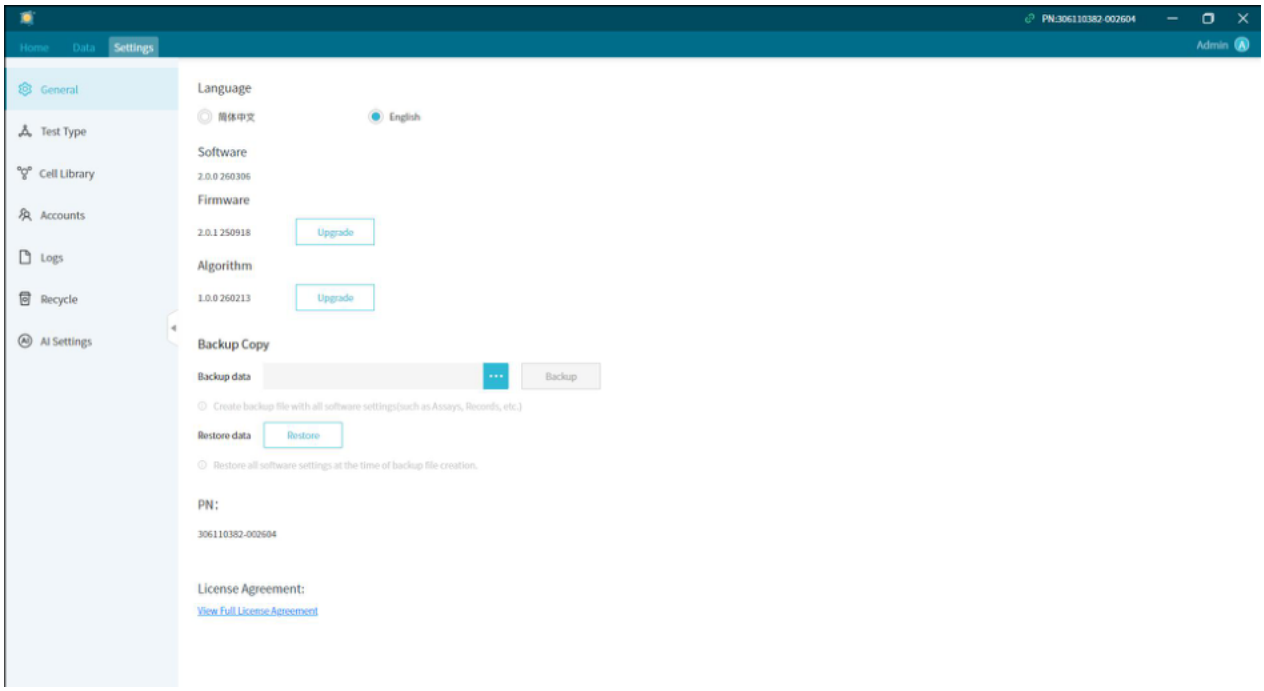


Figure 5-11 General Settings Interface

5.5.1.1 Backing Up Data

1.Click the "..." button to select the backup path;

2.After selecting the path, click the "Backup" button;

3.Wait for the system backup process to complete.

5.5.1.2 Restoring Data

1.Click "Restore";

2.If you need to back up data before restoring, click "OK" in the pop-up window to proceed to the backup data process; if no backup is needed, click the "Skip" button in the pop-up window;

3.After clicking the "Skip" button, select the data file to be restored in the pop-up window and click the "OK" button;

4.Wait for the restoration process to complete. The software needs to be restarted.

Note: Restoring data will automatically delete all existing data in the system, and the data cannot be recovered. Please exercise caution when using the data restoration function.If you need to perform this operation, please back up any data you wish to keep first.

5.5.2 Test Type

The Test type interface displays preset and user-created types. Preset types can only

be copied, as shown in the figure below..

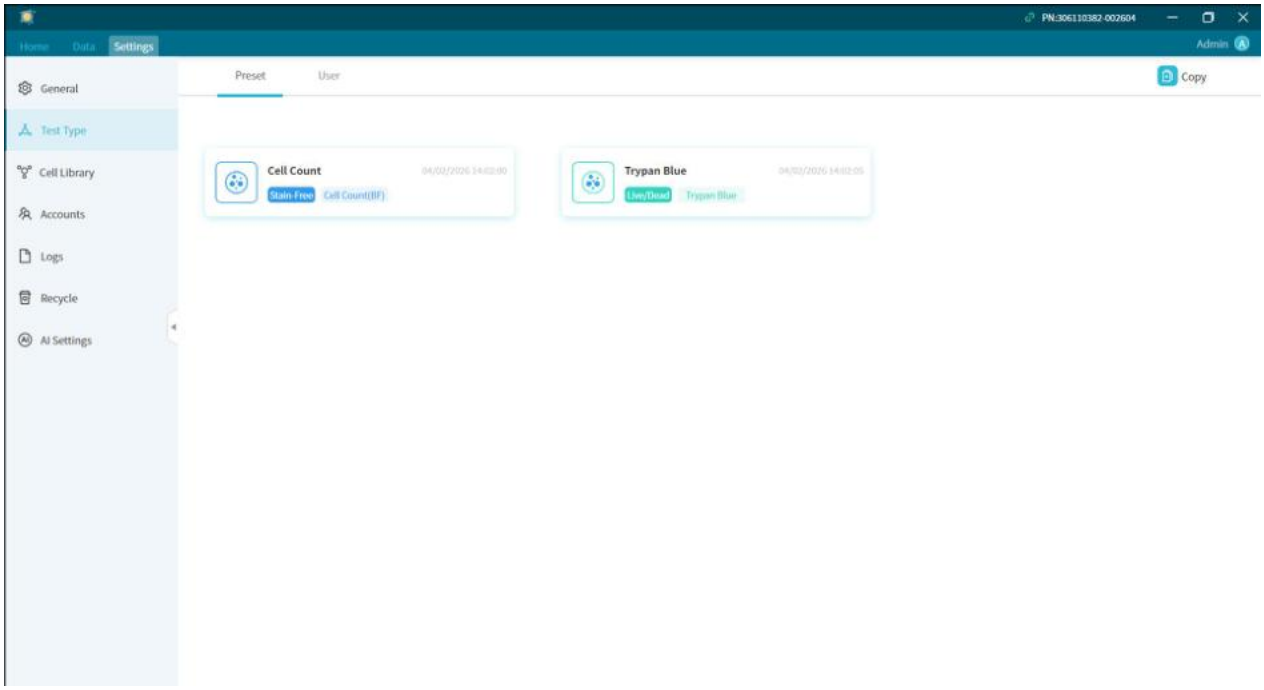


Figure 5-12 Test Type preset Interface

User-created Test types can be created, copied, edited, deleted, and searched by type and time. They can also be searched by name, as shown in the figure below.

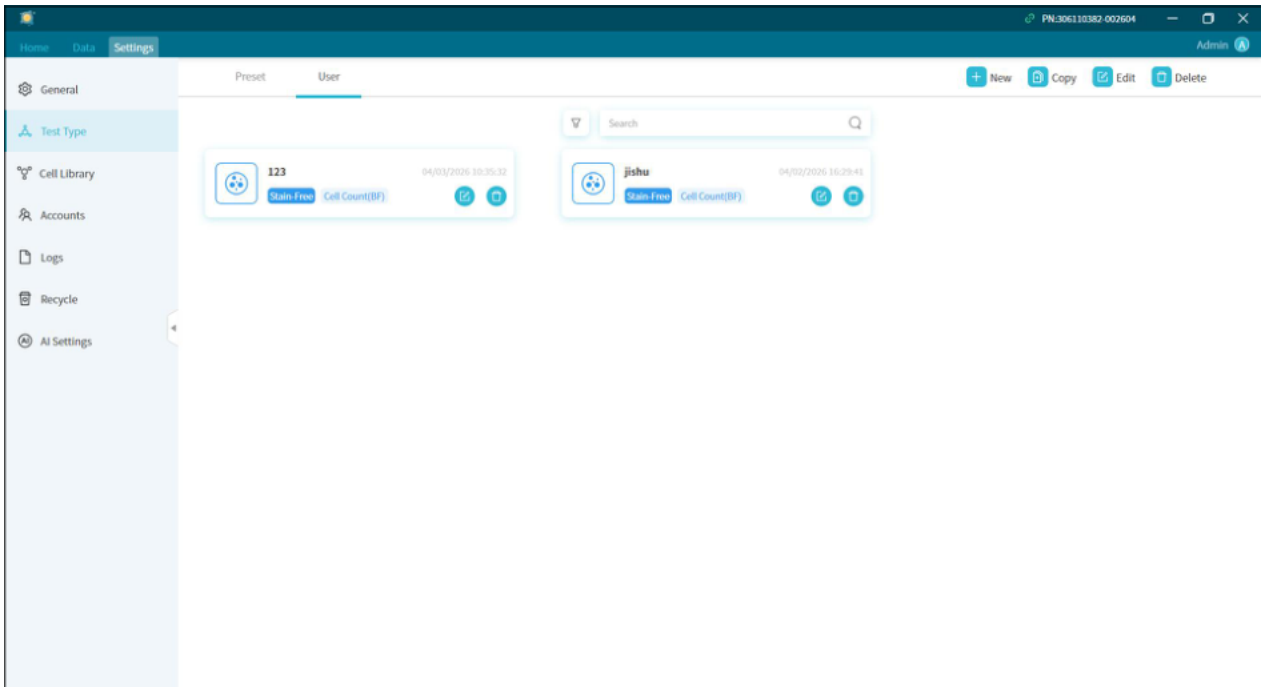


Figure 5-13 Test Type create Interface

The button functions of this interface can refer to table 5-3 below:

Table 5-3 Test Type Interface Button Function

Name	Type	Function
	Button	Click to create a new test type
	Button	Click to copy test type
	Button	Edit test type
	Button	Delete test type

Clicking the "New" or "Edit" button will lead to the interface shown in Figure 5-14, where you can select the labeling method for the Test type, either cell counting or trypan blue.

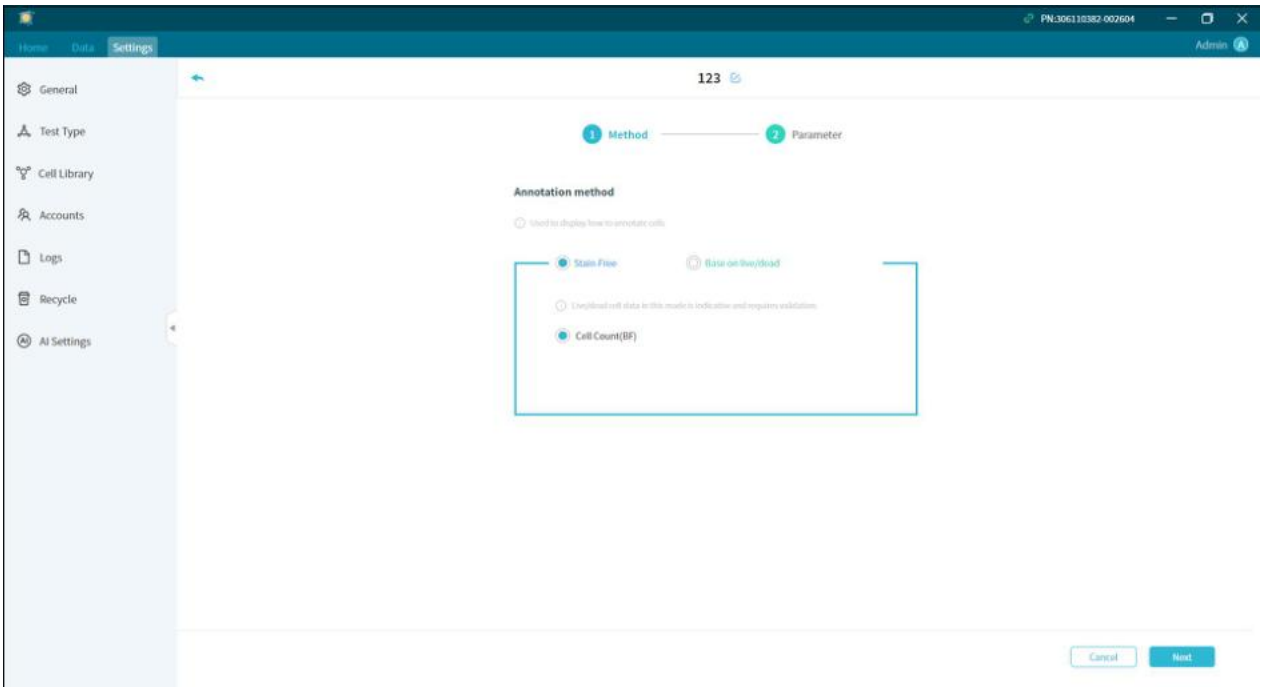


Figure 5-14 New Test Type Interface

After selecting the annotation method, clicking "Next" will navigate to the parameter adjustment interface, as shown in Figure 5-15. Upon switching to this interface, users can adjust parameters such as focus, exposure, gain, and brightness for the relevant channels selected in the current test type. Parameter settings offer two options: [Manual Adjustment]or [Automatic Adjustment]. Clicking "Manual Adjustment" requires users to adjust parameters to preset values that meet test requirements.

Manually set parameters are saved as fixed values and will be automatically called when running this test type. When "Automatic Adjustment" is selected, the algorithm performs real-time analysis based on the actual sample state. Therefore, the parameters are not fixed and are directly related to the user's specific test samples.

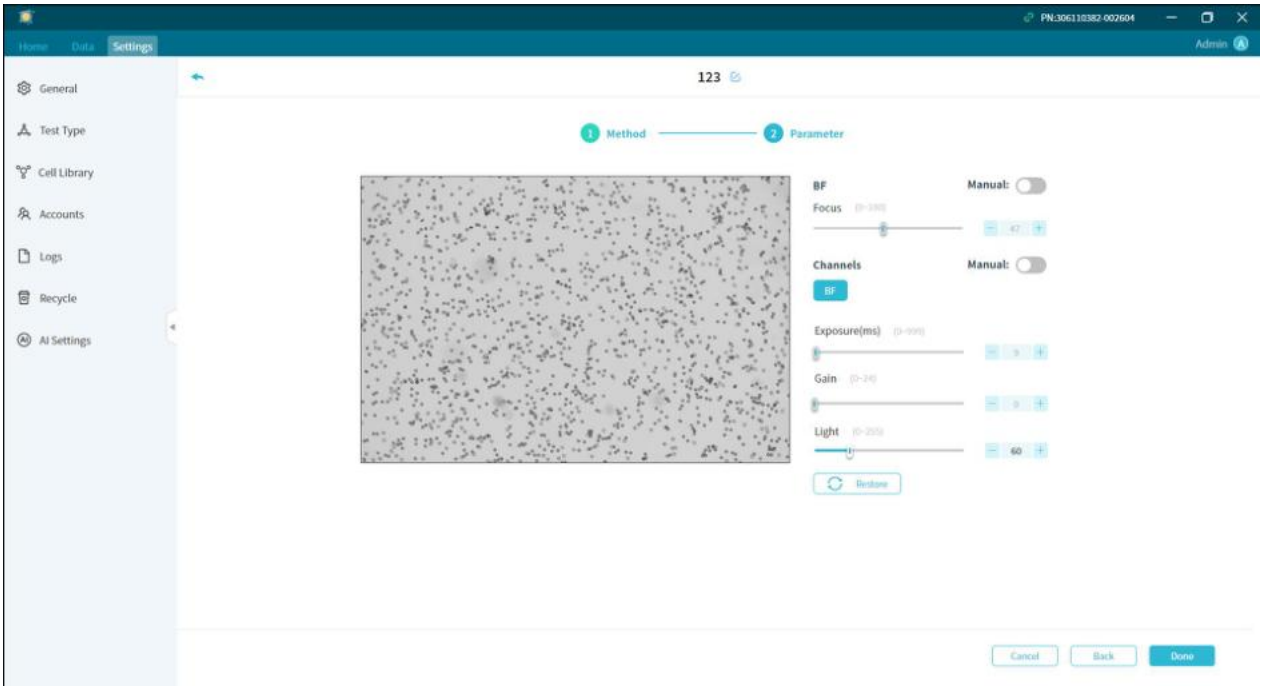


Figure 5-15 Parameter Adjustment Interface

5.5.3 Cell Library

The cell library mainly displays the saved cell types, which can be created, edited, and managed, as shown in the following figure.

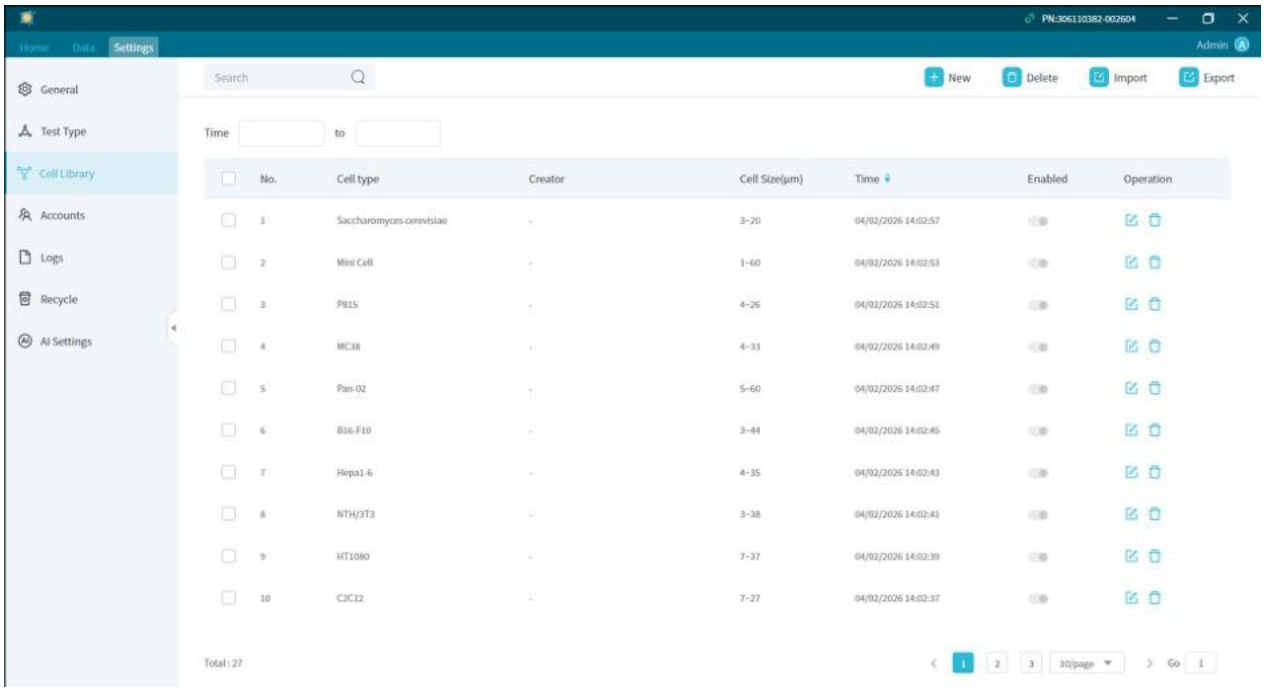


Figure 5-16 Cell Library Interface

The button functions of this interface can refer to table 5-4 below:

Table 5-4 Cell Library Interface Button Function

Name	Type	Function
	Button	Click to create a new cell type
	Button	Edit cell type
	Button	Click to Import Cell Types
	Button	Click to export Cell Types
	Button	Delete cell type

5.5.4 Accounts Management

Click on the user name in the navigation bar to open the user operation pop-up box, where users can change their password or switch accounts, as shown in the figure below.

1. Change password: Can change your own password.
2. Switch user: Click to enter the login screen, and switch users.

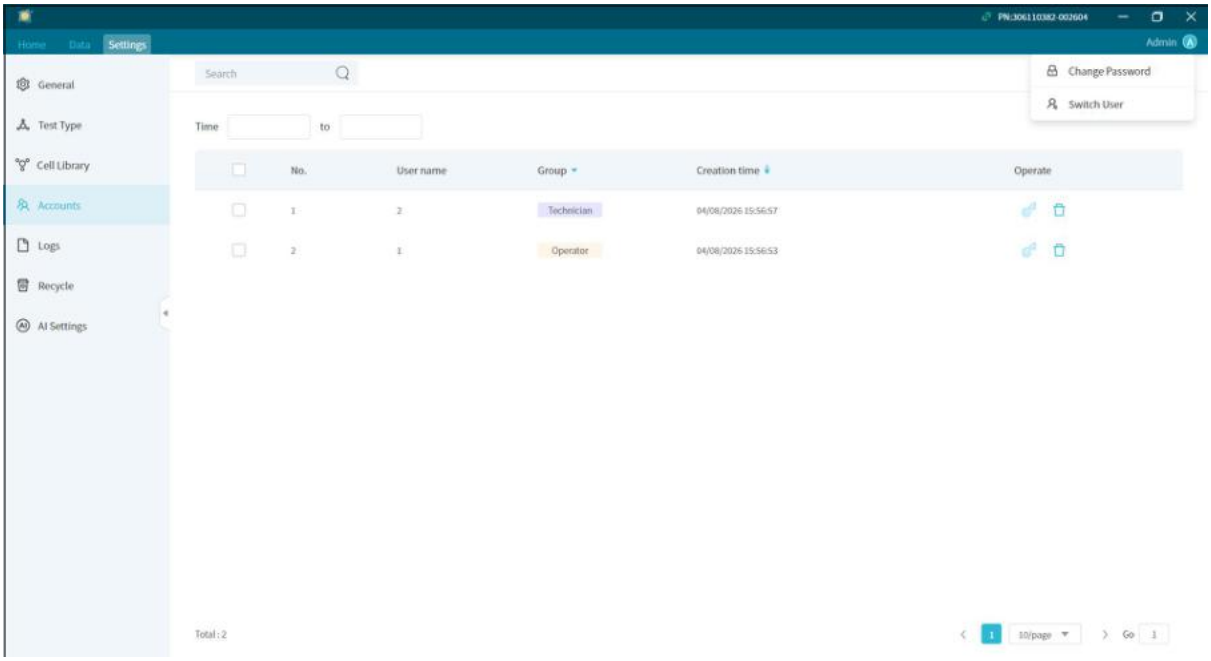


Figure 5-17 User Dropdown Menu

The accounts management interface divides and manages users in the form of a list, which displays user name, group, creation time, and operate, as shown in figure 5-18.

Note: Admin can see all users, while technicians can only see users they have created.

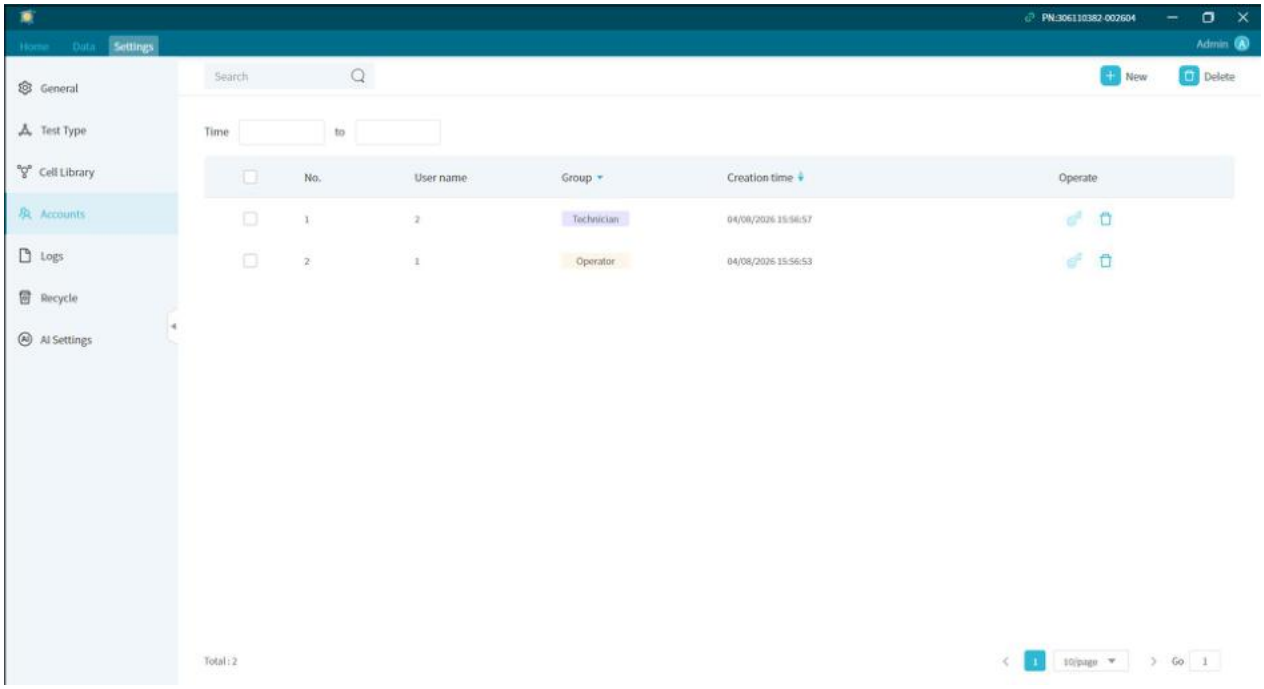


Figure 5-18 Accounts Management Interface

The button functions of this interface can refer to table 5-5 below:

Table 5-5 Accounts Management Interface Button Function

Name	Type	Function
	Button	Click to pop up an add user pop-up window. Admin can choose to add technician or operator users, while technician can only add operator users
	Button	Check the checkbox on the left side of the list to select the user data to be deleted, then click the button to pop up a confirmation pop-up window. After confirming again, complete the operation
	Button	Click to filter users by group
	Button	Click to pop up a sub account change password pop-up window

Click the  button to create the "New User" interface as shown in the figure below. To create a new user, enter the user name, select a group name, and set the password.

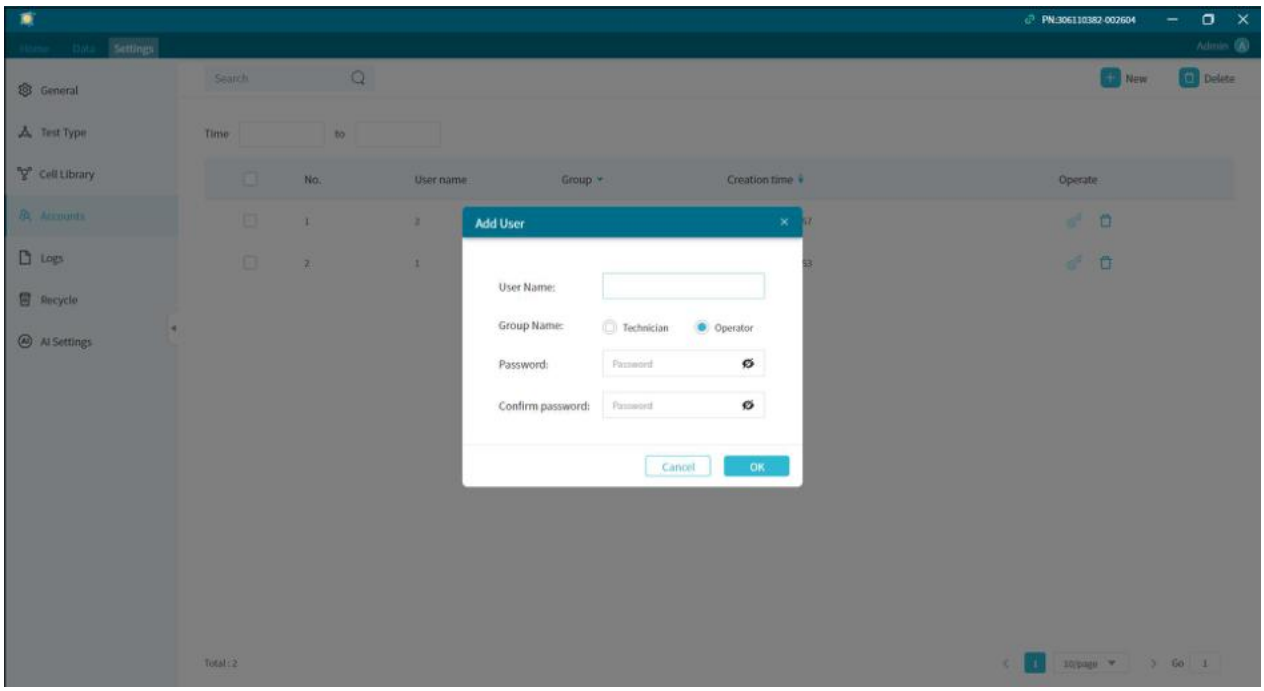


Figure 5-19 Add User Pop-Up Window

Note: The maximum number of users to create is 20 (all users add up to 20, excluding Admin).

5.5.5 Logs

During the start up process, if an error occurs for some reason, it will be recorded in the log, as shown in the figure.

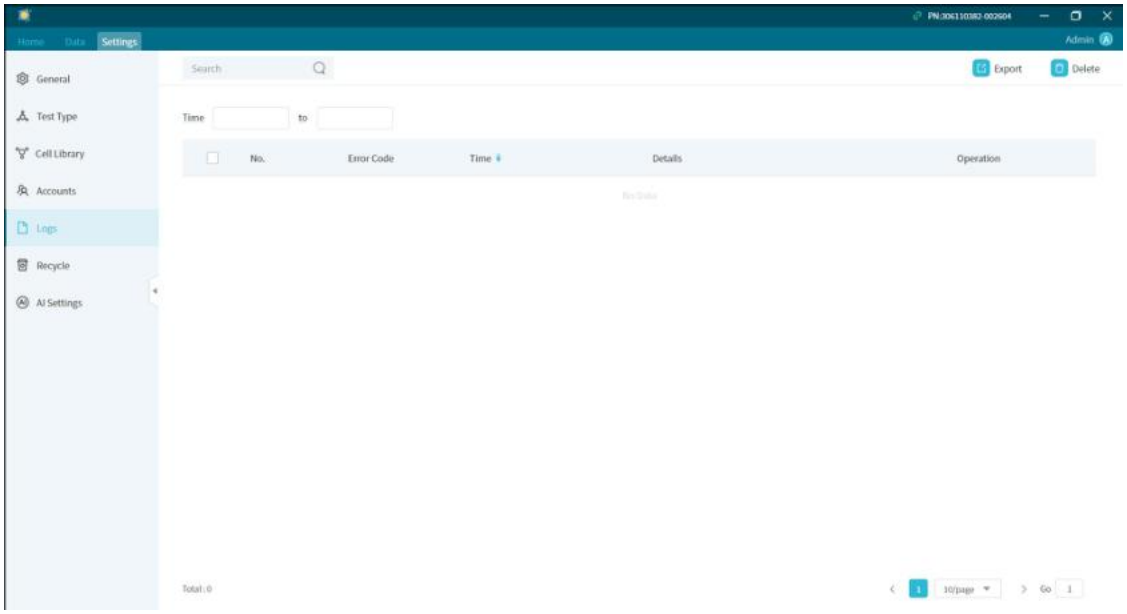


Figure 5-20 Log Interface

5.5.6 Recycle

Click on the recycle to enter the recycle interface, as shown in the figure 5-21. The recycle can recover or permanently delete deleted content, and the recovered content will be restored to the corresponding module based on the recovery time. The types include data, cell, test type, user information, etc., which can be filtered. The recycle displays the name, type, tester, creation time, and deleted time of different contents.

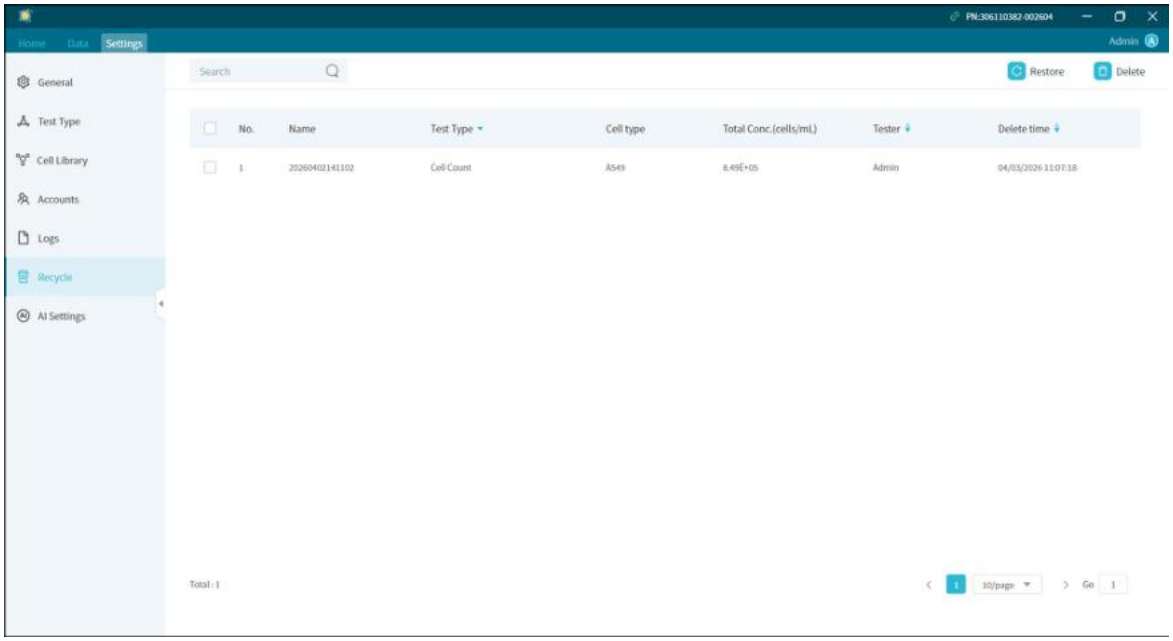


Figure 5-21 Recycle Interface

5.5.7 AI setting

Clicking on AI Settings will take you to the AI parameter setting interface, as shown in the figure. This interface displays the corresponding parameters and their default values for different annotation methods. You can manually modify the default values and save them for the changes to take effect. Note: The option to adjust AI parameters on the results page is only available if the Manually Adjust AI Parameters checkbox is selected. If this checkbox is not selected, the AI option will not appear in the parameter adjustment interface on the results page.

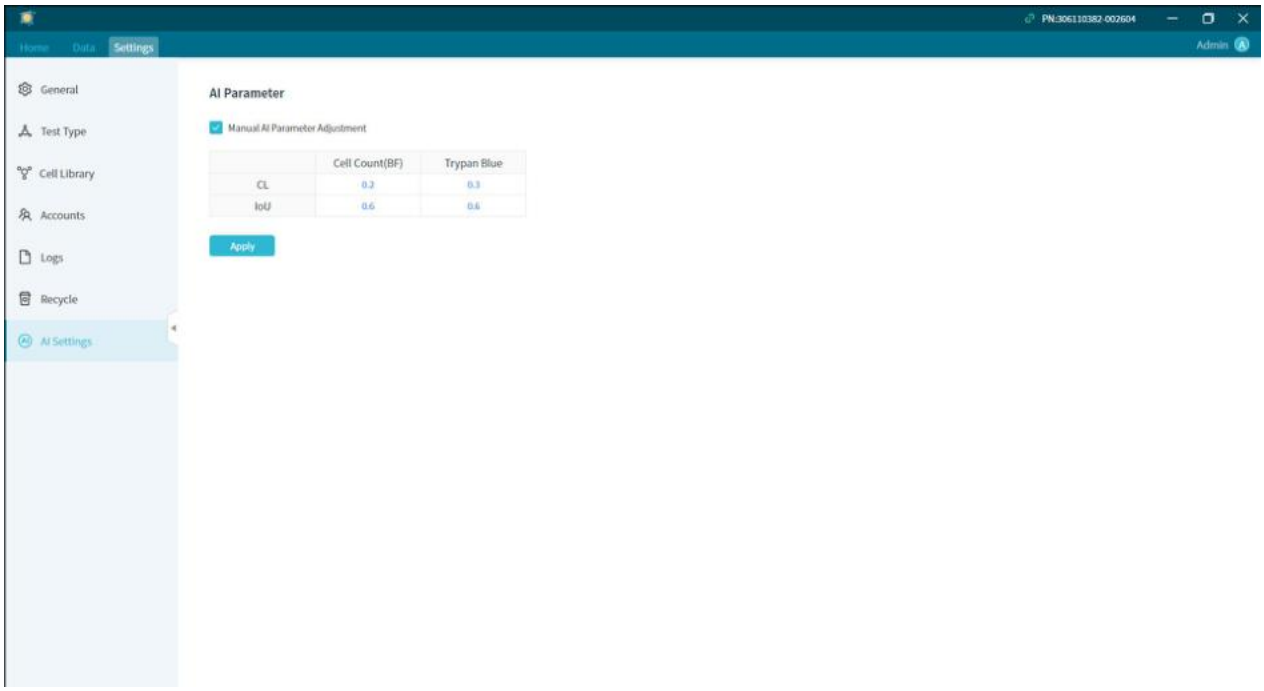


Fig 5-22 AI setting interface

5.6 User Authority

User authorities are divided into three levels: Admin, Technician, and Operator, with Admin having the highest level and Operator having the lowest level.

Permission	Description	Admin	Technician	Operator
Run the test	Operation permissions for the entire process of analyzing the test from start to finish	√	√	√
Test data	View and manipulate experimental data	√	Only able to view and manipulate one's own data	Only able to view and manipulate one's own data
Export report	Run test export report	√	√	√
Account management	Manage one's own account and sub accounts	√	√	×
Change password	Change one's own password	√	√	√
Switch accounts	Permission to switch accounts	√	√	√
General settings	Language Settings, Hardware Upgrade, Algorithm Upgrade,Backup and Restore,	√	No Backup and Restore	No Backup and Restore

Permission	Description	Admin	Technician	Operator
	PN, License Agreement View			
New test type	New permission for test types	√	√	√
Edit test type	Edit, delete, and export test types	√	Only self created can be edited	Only self created can be edited
New cell library	Create cell parameter data	√	√	√
Edit cell library	Edit cell parameter data	√	Only self created can be edited	Only self created can be edited
Import and export cell library	Import and export cell library list data	√	×	×
Delete cell library	Delete parameter data from the cell library list	√	Only self created can be deleted	Only self created can be deleted
Export log	Export of the list of error records that occurred	√	√	√
Delete log	Delete information from the log list	√	×	×
Recycle	Restore or permanently delete deleted data.	√	√	√
AI Settings	Adjust AI algorithm parameters.	√	×	×

6 Maintenance and Care, Storage, Transportation

6.1 Maintenance and Care

- Keep storage environment dry and clean to prevent moisture, corrosion, away from strong electromagnetic interference sources.
- Instrument already calibrated before leave factory. User is not allowed to disassemble and make adjustment. When the instrument is found to be abnormal or not working properly, please contact manufacturer.
- Continuous emergency turning on/off is not allowed.
- Make sure apply the device with correct input voltage scope.
- Do not continuously and violently insert and remove the cell counting slide sockets, as this will increase the chance of damage to the socket parts and affect the test accuracy.
- Warning! Do not use cleaning solutions that are corrosive to aluminum. Avoid scratching the surface of the reaction module base. If this surface is scratched or damaged, it will affect the accuracy of heat control.
- Warning! Do not pour water or other solutions into the base of the reaction module, as this may cause a short circuit in the internal circuit.

6.2 Storage and Transportation

- Storage at room temperature +10℃~+40℃, relative humidity less than 80%, without corrosive gas and with good ventilation.
- Keep away from heavy shock, vibration, and humidity during transportation.

7 Fault Analysis and Solutions

1. Failure and Solution

No.	Fault	Possible cause	Solution
1	Unable to power on	Abnormal power connection	Unplug and restart or check if the power cable is properly powered on
2	Connection anomaly	Incorrect use of USB cable	Connect the B port of the USB cable to the "PC port" of the instrument, and connect the A port to the PC computer
		Disconnected midway, connection status not refreshed	Refresh connection status
3	Unable to import test/cell type	Test/cell type name already exists	Avoid generating test/cell types with the same name
4	Uneven illumination	Instrument malfunction	Restart or contact the manufacturer
5	Unclear auto focus	Fragments or other impurities interfere with focusing	Ensure the cleanliness of the upper and lower surfaces of consumables
6	Cell imaging is normal, not counted	The focus position, bright field brightness, and cell size range are not optimal	Manually adjust the focus position or change to automatic focus
			Automatic exposure adjustment
			Modify the appropriate cell size range
7	Different results for the same sample	The sample has not been homogenized	Mix the sample and count again
8	Abnormal percentage of live/dead cells	The focus position, bright field brightness, and cell size range are not optimal	Manually adjust the focal length position or refocus automatically

2.Common Fault Codes and Their Meanings

Fault Module	Fault Name	Fault Code
Hardware	Focus Motor Homing Failure (Cannot Move In)	E00437
	Focus Motor Zeroing Failure (Cannot Move Out)	E00438
	Communication Command Response Failure (Communication Failure)	E00802
	Communication Action Response Failure (Communication Failure)	E00803
Software	Bright field Channel Dark Current Too High	E00901
	Bright field Channel Light Intensity Too High	E00902
	Bright field Channel Light Intensity Insufficient	E00903

8 Abbreviations and Marks

8.1 Abbreviations

The following abbreviations are for reference and will appear in this operation manual.

A	Ampere
AC	Alternating current
V	Volt
Hz	Hertz
W	Watt
USB	Universal Serial BUS
SD	Secure Digital Card
WiFi	Wireless Local Area Network
Kg	Kilogram
mm	Millimeter
µL	Microliter
hpa	Hectopascal
℃	Degree centigrade

8.2 Marks

The following marks appear on the device.



Warning



European standard



Biological pollution