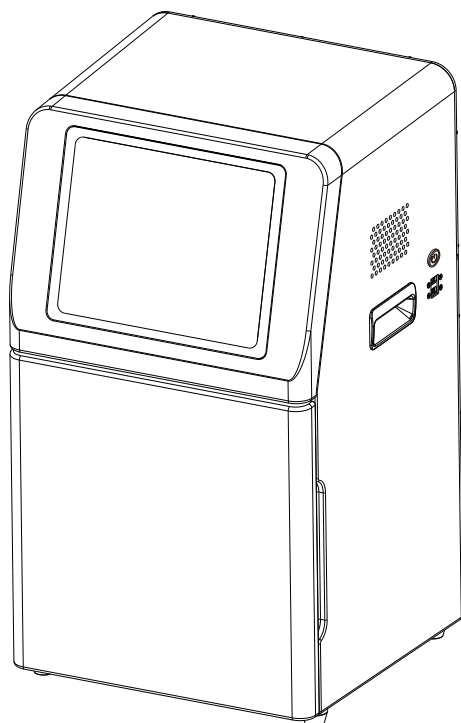




User Manual

Multifunctional Fluorescence Imaging System

SCG-W6000

Please read the instructions carefully and keep them properly before using the product for future reference.

Wuhan Servicebio Technology Co.,Ltd.

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Please verify the configuration list and read the precautions before use;

Please refer to the corresponding explanation in this user manual for the operating procedure and different imaging modes in use;

Please clean this product following the instructions in this user manual after use;

For any questions related to this product, please contact: info@servicebio.com at any time

01 Core Application Scenarios

SCG-W6000 is a product integrating multiple functions including gel imaging, chemiluminescence imaging, membrane fluorescence imaging and tissue fluorescence imaging, etc. It is equipped with a 9-megapixel high-sensitive cooling camera for fast, accurate and high-throughput detection and imaging for the specimen, widely applied on life science, medical and environmental fields.

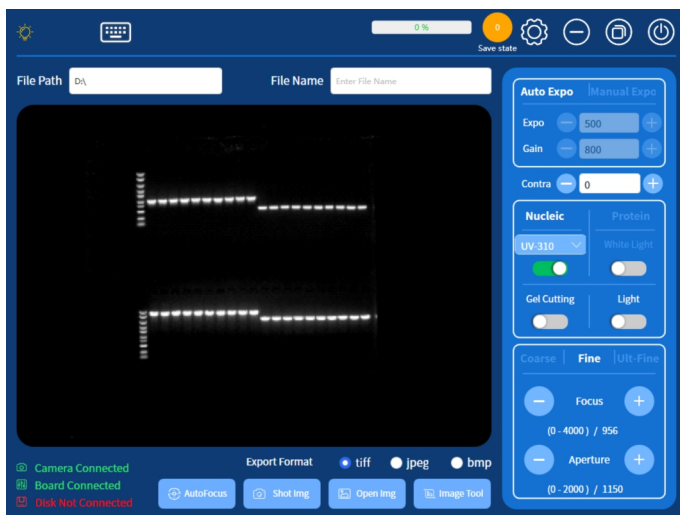
Scenario 1

User Pain Point:

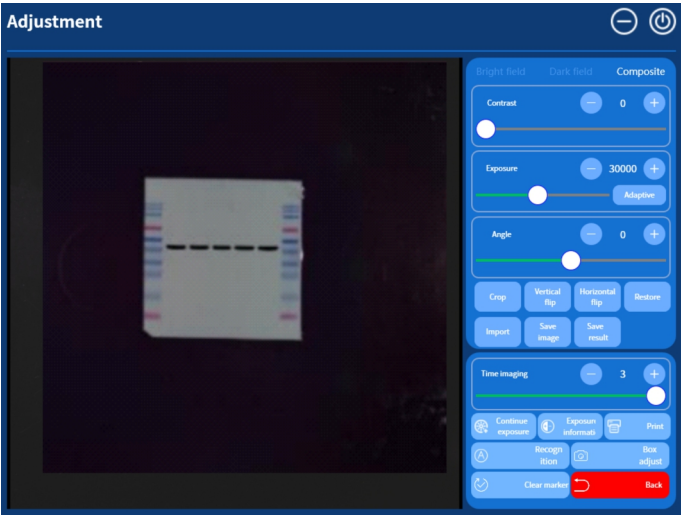
Laboratories need to configure multiple imaging devices to complete nucleic acid gel, protein gel, and chemiluminescence imaging detection, resulting in high procurement costs, large space occupation, complex operation, and inconsistent data standards.

Servicebio Solution:

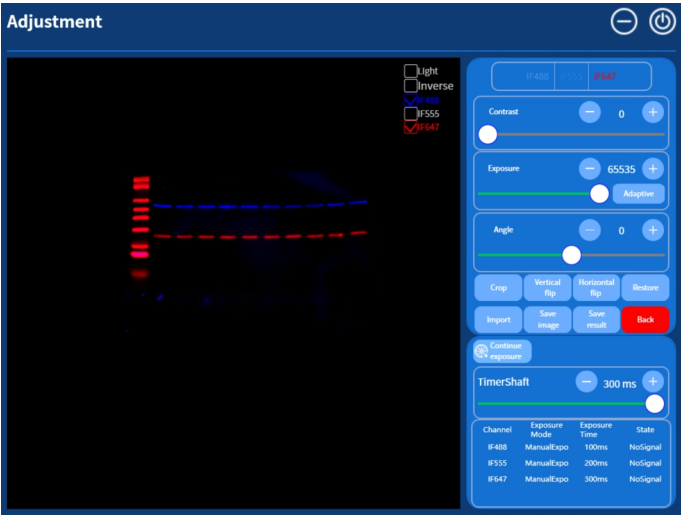
W6000 integrates four imaging systems: gel imaging, chemiluminescence imaging, membrane fluorescence imaging and tissue fluorescence imaging. It fully meets multi-scenario imaging requirements, cuts equipment investment costs, saves lab space and guarantees consistent imaging data.



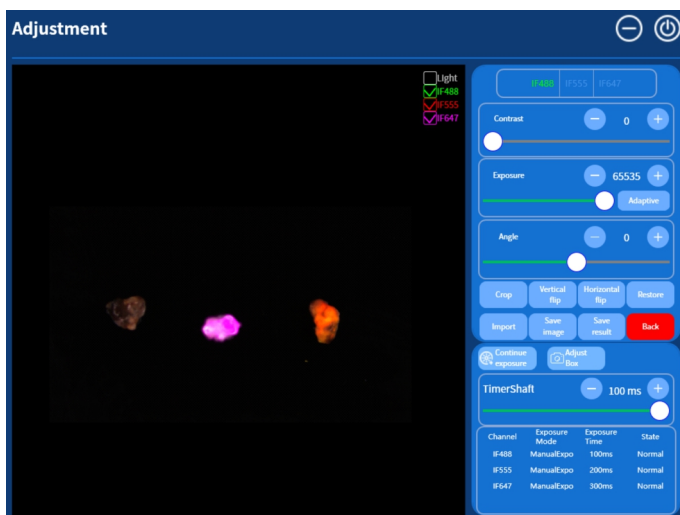
Nucleic Acid Gel



Chemiluminescence



Membrane Fluorescence



Tissue Fluorescence

Scenario 2

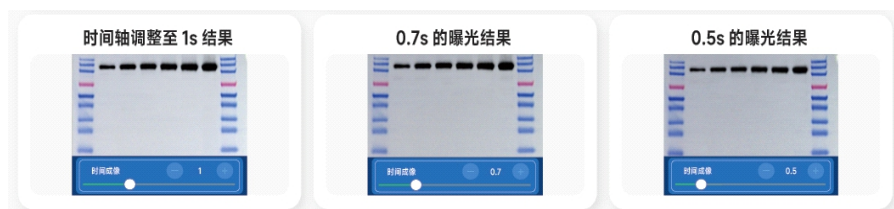
Pain Point:

In chemiluminescence imaging experiments, strong signals are prone to overexposure causing band distortion, while weak signals require repeated capture or re-exposure, making operation tedious and ideal images difficult to obtain.

Servicebio Solution:

Equipped with timeline and cumulative exposure functions, supporting retrieval of images at any time point during exposure. In chemiluminescence imaging experiments, strong signals on the membrane can be finely adjusted in 0.1s increments below 1s to avoid overexposure; weak signals can continue exposure based on existing exposure time to enhance signals, obtaining ideal data without repeating experiments.

In fluorescence imaging experiments, intense signals on the membrane support fine 10ms adjustment to avoid overexposure. Weak signals can be further exposed to enhance intensity, acquiring ideal data without repeated tests.



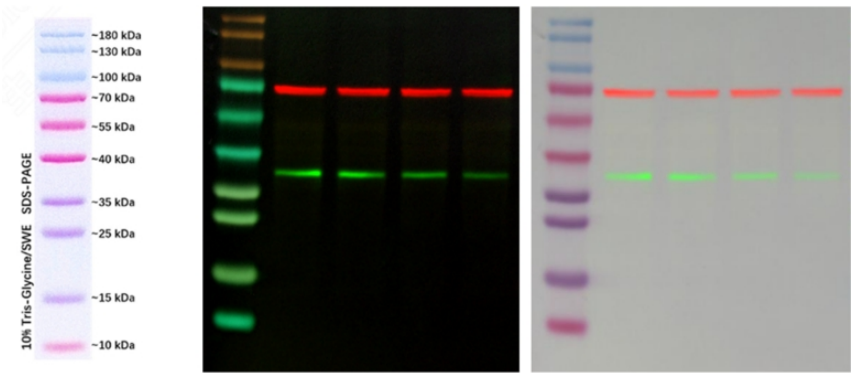
Scenario 3

Pain Point:

The merged result of conventional bright-field pre-stained marker and dark-field fluorescent WB is not conducive to observing fluorescence bands, affecting experimental result interpretation.

Servicebio Solution:

Membrane fluorescence imaging is equipped with a pre-stained marker color inversion function. With one click, the bright-field pre-stained marker is inverted and merged with the fluorescent WB result, accurately indicating the molecular weight position of the bands without affecting the observation of fluorescent bands.



Scenario 4

Pain Point:

In chemiluminescence imaging, non-specific binding of the Marker can expose spurious signals, interfering with the interpretation of real bands and affecting the accuracy of WB experimental results.

Servicebio Solution:

Equipped with Marker removal function, one-click restoration of true Marker bands, effectively removing interference from non-specific spurious signals, ensuring clear and accurate band interpretation.



Scenario 5

Pain Point:

Traditional imaging devices can only capture one membrane at a time. When sample volume is large, it requires repeatedly opening/closing the door and capturing one by one, which is time-consuming and labor-intensive. Additionally, multiple devices increase costs and occupy large space.

Servicebio Solution:

Chemiluminescence supports capturing multiple membranes simultaneously, completing batch membrane detection in one imaging session. Batch membranes can also be split into individual original files for each membrane, greatly improving instrument use efficiency, saving procurement costs and laboratory space.



02 Safety Information

1. General Safety Warnings

- (1) Please read this manual completely before installing and operating the instrument. The user assumes responsibility for damage and safety risks caused by non-compliance with specifications.
- (2) The instrument is only to be operated by trained personnel. Minors and unauthorized personnel are prohibited from touching or operating the device.
- (3) Do not disassemble, modify, or alter the internal structure of the instrument. Unauthorized modification will lead to device failure, safety hazards, and voiding of the warranty.

2. Electrical Safety

- (1) Do not operate power switches or plug/unplug power cords with wet hands. Do not splash liquids on the main unit, power interface, control lines, or inside the chassis.
- (2) Regularly check power cords, plugs, and sockets for damage, aging, or looseness. If abnormalities are found, immediately shut down and disconnect power. Do not continue operating the device.
- (3) Do not block ventilation openings around the instrument. Maintain $\geq 10\text{cm}$ heat dissipation space to avoid overheating and circuit burnout. Turn off the main power when not in use for extended periods.
- (4) When the instrument is operating, do not pull the power cord or move the instrument.
- (5) In case of device malfunction, smoke, unusual noise, or odor, immediately cut off the power supply, do not force restart, and contact the manufacturer's after-sales service.

3. Optical and Device Protection Safety

- (1) Do not touch or scratch the lens inside the dark chamber with hands or sharp foreign objects.
- (2) After placing the experimental sample, close the instrument door properly to prevent external light from entering the dark chamber and affecting experimental results.
- (3) During imaging experiments, do not shake the experimental table or instrument to avoid affecting image quality.
- (4) After the experiment, clean the samples and experimental residues inside the dark chamber.
- (5) Long exposure and continuous prolonged operation require intermittent shutdown for heat dissipation to prevent light source aging and equipment overheating failure.

03 Environmental Requirements

3.1 Operation Environment

Choose the operation environment according to the following requirements:

- 1.Power supply: 200~240VAC (110V for export), 50~60Hz, 200W; voltage fluctuation not exceeding $\pm 10\%$ of rated voltage.
- 2.Room temperature: 5°C to 40°C.
- 3.Relative humidity: Maximum 80%.
- 4.The workspace should be kept clean and dry.
- 5.The instrument should be placed on a level, smooth, dry, non-slip surface.
- 6.The workbench should be placed in an area with minimal vibration.
- 7.Do not use the instrument in areas with explosion hazards.
- 8.Do not use the instrument for extended periods in high humidity or high dust environments.

3.2 Transport Conditions

- 1.Packaging: Use internal padding and secure the outer box to avoid jolts during transport or collisions during loading/unloading.
- 2.Transport: Keep the instrument upright, stable, and do not invert, tilt, or impact it.

04 Product Introduction

4.1 Product Overview

The SCG-W6000 is a multi-functional instrument integrating gel imaging, luminescence imaging, membrane fluorescence imaging and tissue fluorescence imaging. Equipped with a 9-megapixel high-sensitivity cooled camera, it enables rapid, accurate and high-throughput sample detection and imaging, and is widely applied in life sciences, pharmaceuticals, environmental protection and other fields.

4.2 Product Features

1. Gel Imaging

- (1) Meets high-definition imaging requirements for both nucleic acid and protein gels;
- (2) Can capture color protein gels for more intuitive image results;
- (3) Supports nucleic acid gel cutting, equipped with standard UV laser protection plate, cut-off depth >OD7, high protection level, safer gel cutting;
- (4) Standard 310/254/365 nm LED UV light sources, meeting imaging requirements for samples labeled with common nucleic acid dyes such as EB, SerRed, SerBlue, GoldView, SYBR Green.

2. Chemiluminescence Imaging

- (1) Weak membranes can also yield WB results in one go using cumulative exposure mode;
- (2) For overexposed strong membranes: fine-tune by 0.1s to achieve good WB results;
- (3) For non-specific binding signals from Marker: one-key restoration of true Marker bands;
- (4) Use "Source File Analysis Software" to adjust the timeline, obtain bands of different signal intensities, and perform grayscale analysis.

3. Membrane Fluorescence Imaging

- (1) Equipped with 3 standard fluorescence channels: IF488, IF555, and IF647, enabling simultaneous detection of multiple proteins on the same membrane;
- (2) Unique color inversion function: allows conventional pre-stained markers to be used for fluorescent WB;
- (3) Capable of saving the full time-lapse signal: weak membranes can be imaged with cumulative exposure; for strong membranes, exposure time can be finely adjusted in 10-ms increments down to 100 ms. Using the "source file analysis software", the time axis can be adjusted at any time to obtain bands with varying signal intensities;
- (4) "Source file analysis software": enables brightness adjustment and grayscale analysis for any channel; can generate multiplexed images, allowing fluorescent WB multiplexing even with homologous primary antibodies.

4. Tissue Fluorescence Imaging

- (1) Capable of capturing autofluorescence of tissue samples. Based on tissue fluorescence, select areas with fluorescence for section preparation, preserve autofluorescence signals via scanning, then merge the tissue autofluorescence scan results with immunofluorescence scan results to obtain co-staining effect images of tissue autofluorescence and multiple fluorescent labels.

4.3 Technical Specifications

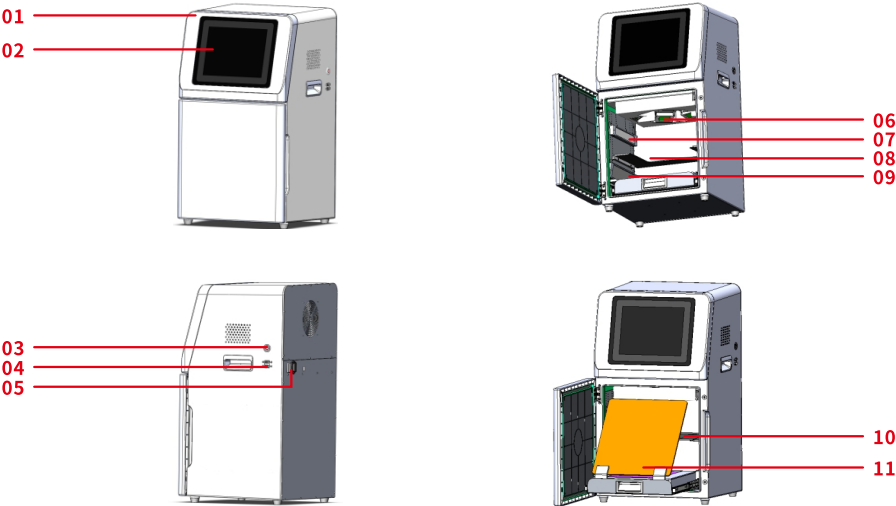
Product Name		Multifunctional Fluorescence Imaging System
Cat.No.		SCG-W6000
Camera	Pixels	9 Megapixels
	Resolution	3000×3000
	Pixel Size	3.76×3.76 μm
	Target Area Size	1“ (11.28×11.28 mm)
	Full Well Capacity	16.5ke-(HCG),50.5ke-(LCG)
	Sensitivity	877mv@1/30s
	Readout Noise	1.24e-(HCG) , 3.22e-(LCG)
	Dark Current	0.0003e-/s/pixel@-15℃
	Signal-to-Noise Ratio	42.2dB(HCG),47dB(LCG)
	Exposure Time	0.1ms~1h
	Binning Mode	1×1,2×2,3×3
	Grayscale	16-bit (65536 gray levels)
	Cooling	-40℃ relative to ambient
Lens	Type	Monochrome Camera
	Aperture	F0.95~F16
	Focal Length	17 mm
Light Sources	Type	Motorized Lens
	Brightfield	Episcopic LED white light, symmetrical on both sides

Light Sources	UV	310 nm LED array, uniform transmission illuminationEpiscopic 254 nm/365 nm LED UV light, symmetrical on both sides
	Fluorescence	Episcopic fluorescence light sources: 470 nm, 530 nm, 650 nm, symmetrical on top
	Blue/White Dual Light	Optional: blue/white transmission switch, 3 power levels
Dark Box	Light-tightness	Fully light-tight, isolates ambient light
	Door sensor	Controls brightfield and 310 nm UV LED sources
	Filter wheel	Switches filters according to mode to match chemiluminescence, gel, and fluorescence applications
	Field of View	Blotting membrane effective field of view: 155×155 mm Protein gel effective field of view: 155×155 mm Nucleic acid gel effective field of view: 215×215mm Fluorescent membrane effective field of view:136×136mm
	Gel Cutting	When door is opened, UV light source can be pulled out; use UV protective plate for gel cutting
	Auto Exposure	Smart exposure quickly determines optimal exposure time, auto binning, combined with timeline imaging and time accumulation; one operation yields optimal image
	Manual Exposure Mode	High Quality: Highest image quality Standard: Balances image quality and exposure speed High Sensitivity: Fastest exposure speed
Software Functions	Real-Time Imaging	Shows signal changes during exposure, captures every detail; overexposed areas are highlighted
	Temporal Imaging	Generates every frame during exposure; user can select any frame as final output via precise backtracking
	Time Accumulation	For underexposed samples, user can continue exposure after the initial exposure ends, adding extra exposure time
	Marker Removal	When markers show extra signal bands, one-click removal without re-preparing the sample
Industrial Computer		10.4 inch, 1024x768, Windows 10 OS, 16 GB RAM, 512 GB SSD, built-in Bluetooth & Wi-Fi
External Interfaces		USB 3.0×2
Operating Voltage		90~132 VAC / 180~264 VAC (selectable via switch), 47~63 Hz
Power		≤300W
Dimensions		400×371×700 mm
Net Weight		35Kg

4.4 Configuration List

No.	Name	Specification	Qty
1	Multifunctional Fluorescence Imaging System主机	SCG-W6000	1
2	Black Sample Tray		2
3	White Sample Tray		2
4	UV Protection Plate		1
5	Mouse		1
6	Power Cord	250V-10A	1
7	Certificate of Conformity		1
8	User Manual		1

4.5 Functional Unit Description



- 01 Internal camera and lens assembly – core imaging component
- 02 10.4-inch industrial computer – user software operation interface
- 03 Power switch
- 04 External USB 3.0 port
- 05 Power socket
- 06 Fluorescence light source
- 07 LED white light source for illumination
- 08 High-quality light-tight imaging dark chamber
- 09 254nm & 365nm UV light source
- 10 Sample tray – removable, for placing samples to be imaged
- 11 UV light source and drawer

05 Unpacking and Installation

For detailed operational procedures of this step, scan the QR code to view the corresponding instructional video.

1. After receiving the instrument, open the outer carton. The top layer contains the manual, power cord, mouse, sample trays, and certificate of conformity. Verify all components are present (see section 4.4 Configuration List).



2. Remove the inner foam box, place the main unit upright on a level, vibration-free workbench. Remove the stretch wrap and internal foam. Place the sample trays, connect the power cord. Installation is now complete. Press the side power button to power on and use.



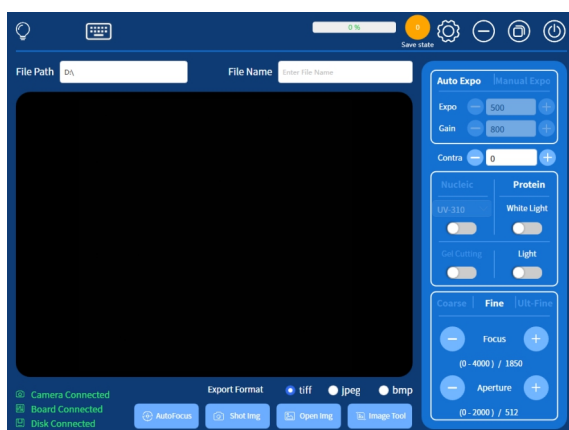
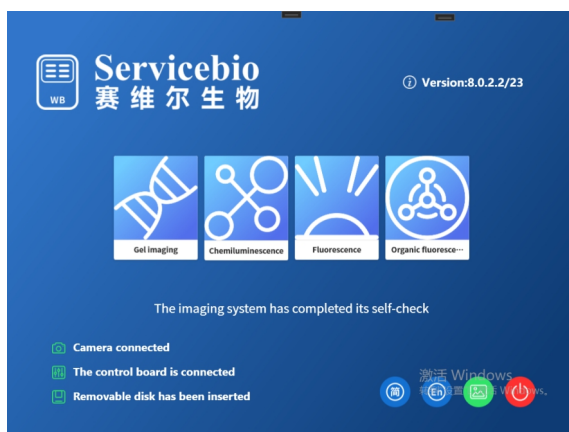
06 Instrument Operation Procedure

For detailed operational procedures of this step, scan the QR code to view the corresponding instructional video.

6.1 Gel Imaging Capture

6.1.1 Main Capture Procedure

1. Plug in the power cord, press the side power switch. The software auto-starts after power-on. Click "Gel Imaging" to enter the shooting page.



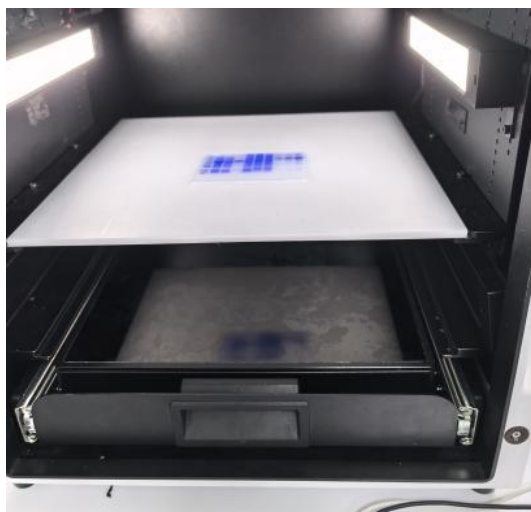
(2) Load the sample

a. Nucleic acid gel: Open the instrument door, place the prepared nucleic acid gel sample in the center area of the UV light box surface. Close the instrument door.

b. Protein gel: Open the instrument door, place the prepared protein gel sample on the white tray. Then place the tray flat into the groove inside the instrument's dark box. Close the instrument door.



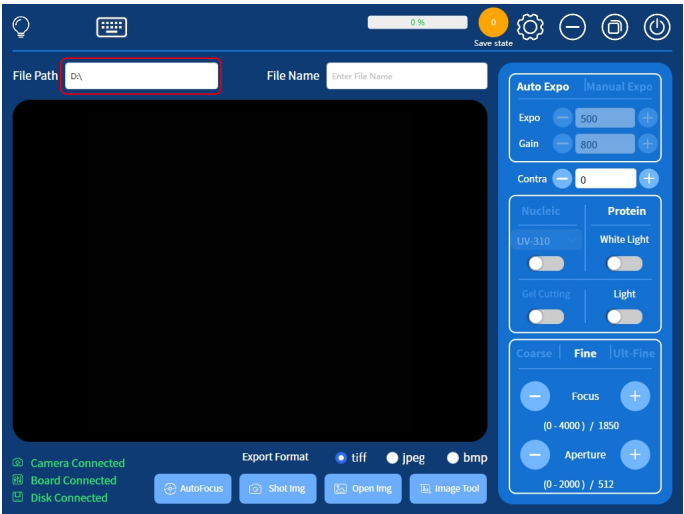
a. Load Nucleic Acid Gels



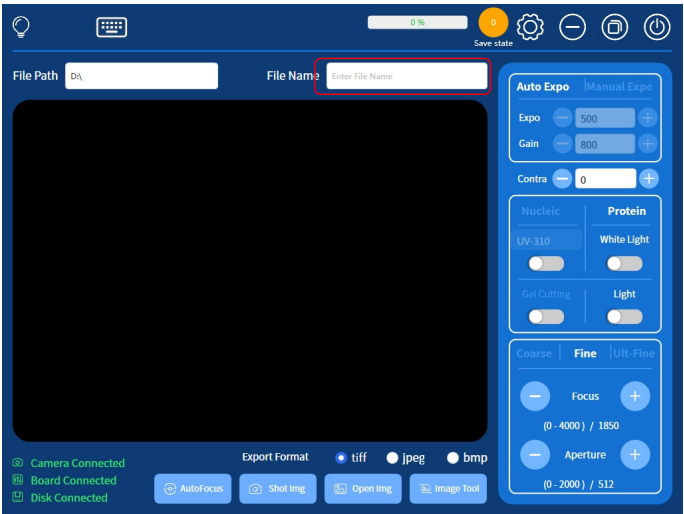
b. Load Protein Gels

(3) Set file save path and name

Double-click the blank box next to "File Path" to select the result save path. Click the blank box next to "File Name" and enter the name for the saved results. Subsequent saved results will use this name as a prefix and the capture time as a suffix for default naming.

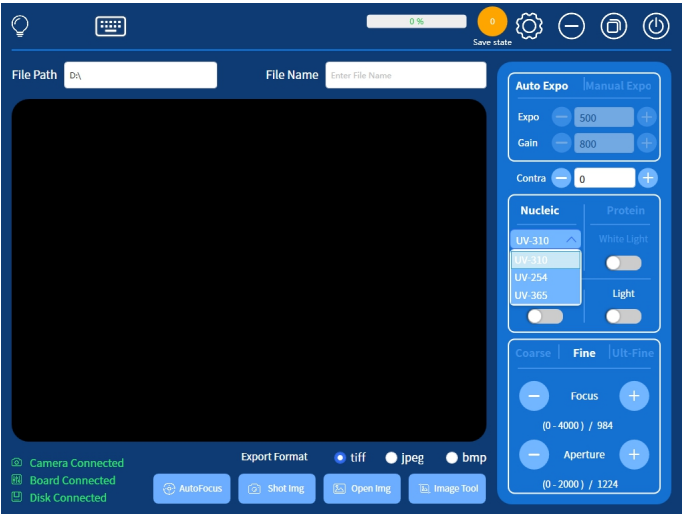


a. Select Storage Location



b. Enter File Name

- (4) Select capture mode (subsequent entries will default to the last used capture mode)
- a. In nucleic acid gel mode, select the desired UV wavelength: 254nm, 310nm, 365nm. (Default 310nm)
 - b. Protein gel mode.



a. Nucleic Acid Gel Mode



b. Protein Gel Mode

(5) Set camera parameters, adjust the lens to obtain a clear image.

a. Camera parameter settings:

Select "Auto Mode", the instrument will automatically set "Exposure" and "Gain".

Select "Manual Mode", the "Exposure" and "Gain" values will be the values set in manual mode during the last experiment. Click the "+" and "-" buttons to adjust the values, or click the value box to enter a value directly.

Exposure: Sets the camera exposure time in ms. Manual setting range is 10~5000ms. Manually increasing exposure time can brighten the image. It is recommended not to exceed 2000ms, otherwise the frame rate will be too low and image refresh will be slow.

Gain: Sets the camera gain. Manual setting range is 100%~5000%. Increasing gain increases both signal and noise. It is recommended not to exceed 2000%, otherwise noise will be significant.

Contrast: Contrast adjustment, range -100 to 100, default is 0.

b. Lens adjustment: Select "Coarse/Fine/Ultra-fine" adjustment to choose the step size for adjusting "Focus" and "Aperture" values.

Click the "+" and "-" on the "Focus" and "Aperture" lines to adjust the corresponding values, or click the "Auto Focus" button for one-key focusing.

Coarse/Fine/Ultra-fine: Coarse adjustment has larger step sizes: Focus step 500, Aperture step 200.

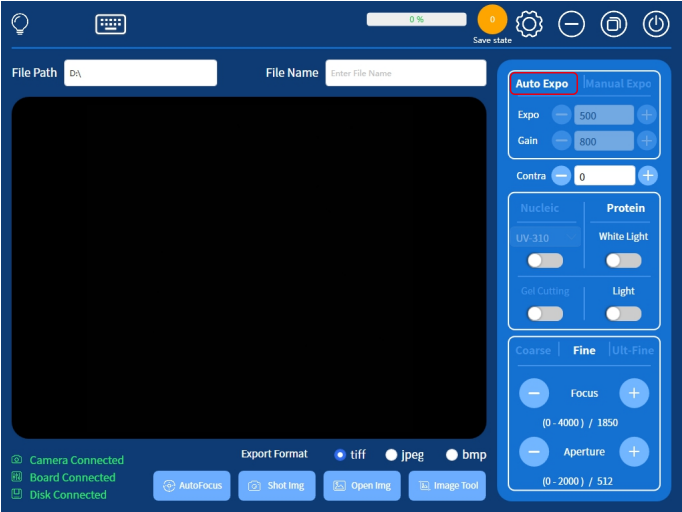
Fine adjustment has medium step sizes: Focus step 200, Aperture step 50.

Ultra-fine adjustment has smaller step sizes: Focus step 25, Aperture step 5.

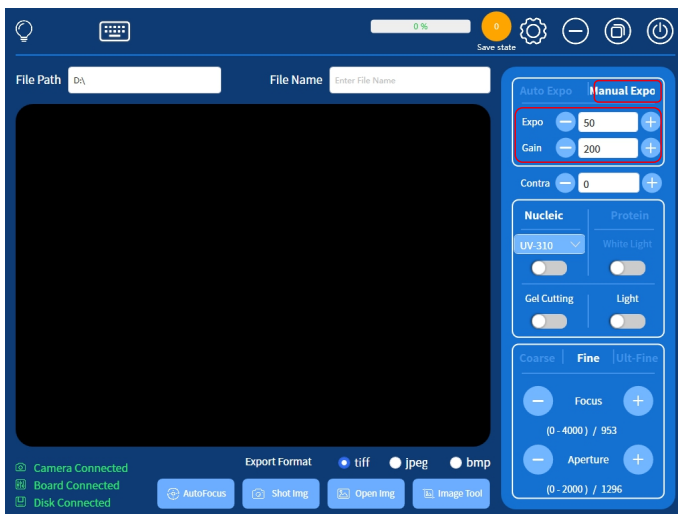
Focus: Click the "-" and "+" buttons to adjust image clarity, adjustment range 0~4000.

Aperture: Click the "-" and "+" buttons to adjust image brightness, adjustment range 0~2000.

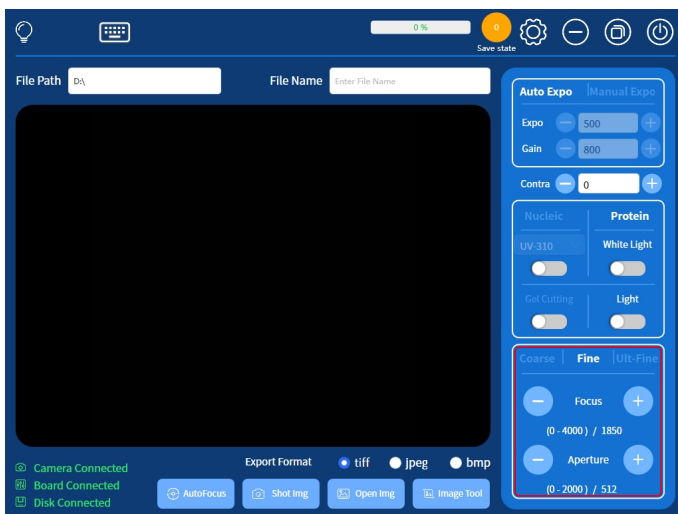
Note: When adjusting "Focus" and "Aperture" values, pay attention to the adjustment step size and the number of times you click "+" or "-" to avoid exceeding the adjustment range.



Camera Settings (Auto Mode)

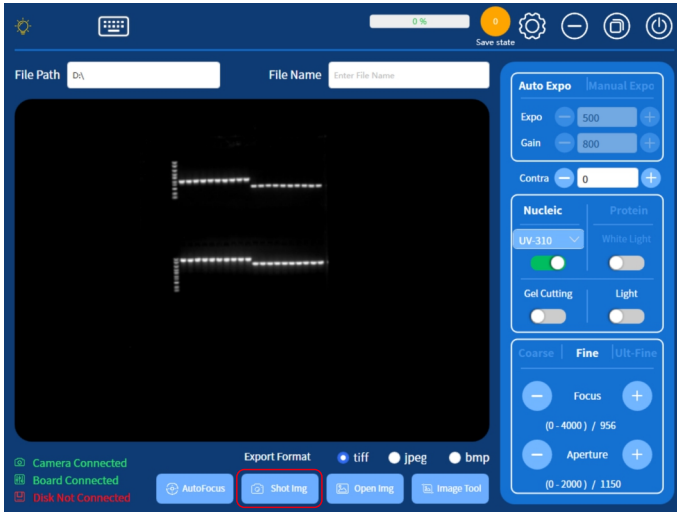


Camera Settings (Manual Mode)



Lens Adjustment

(6) Select export format tiff/jpeg/bmp, click "Capture Image" to save the result.



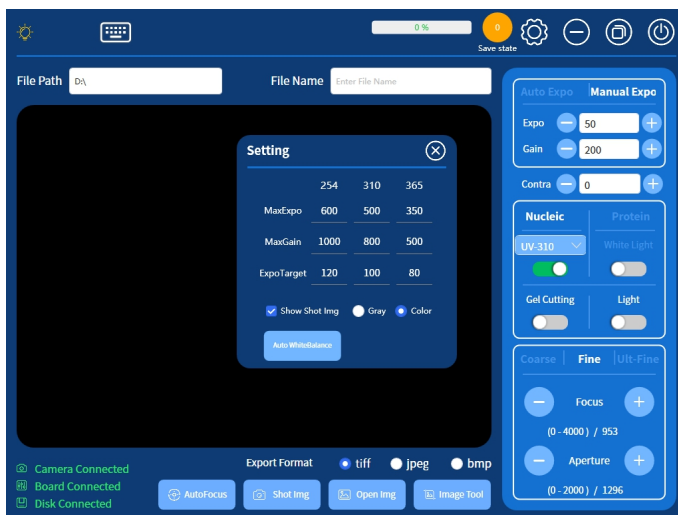
(7) After capture completes, it automatically jumps to the image tools page, where you can process the image.



6.1.2 Function Modules

1. Parameter Configuration Function

Click the settings button in the upper right corner to open the parameter configuration window. Here you can set the upper limits for exposure time and gain for each UV wavelength, the exposure target, choose whether to display the captured image and whether the image is grayscale or color, and set auto white balance.

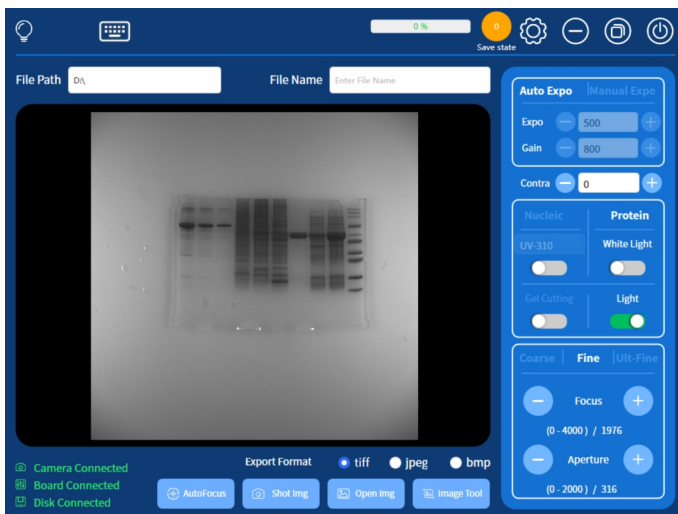


Parameter Configuration Window

- (1) Max Exposure: Upper limit of exposure time in auto exposure mode.
- (2) Max Gain: Upper limit of gain in auto exposure mode.
- (3) Exposure Target: In auto exposure mode, exposure and gain are automatically adjusted based on the displayed strength of the sample luminescent signal.
- (4) Show Captured Image: When checked, after capturing an image, it automatically jumps to the image tools page for easy editing. When unchecked, after capturing an image, it stays on the preview capture page for convenient continuous capture.



Image Tools Page (Checked)

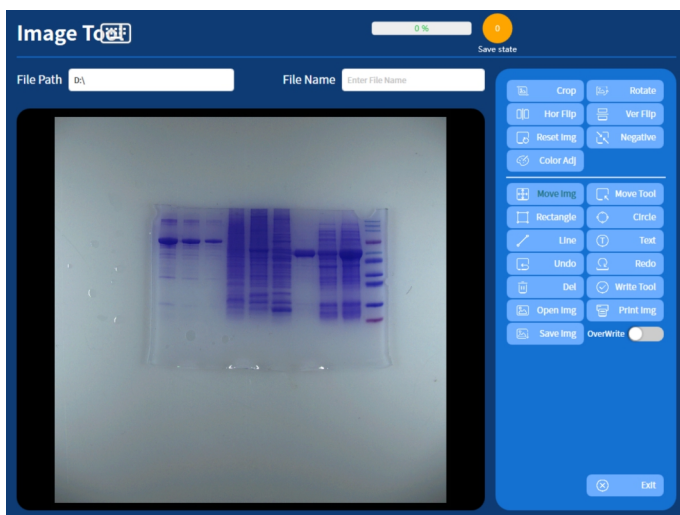


Preview Capture Page (Unchecked)

(5) Grayscale/ Color: Used in protein gel mode. Checking Grayscale displays a monochrome protein gel image. Checking Color displays a color protein gel image.

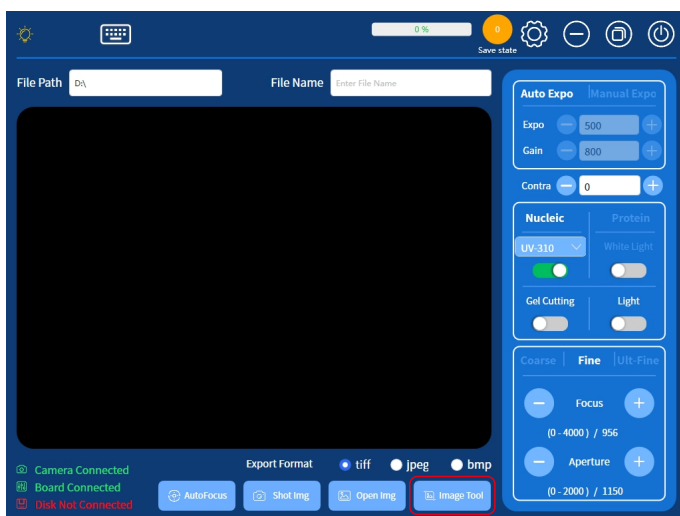


Grayscale Image (Checked Grayscale)



(6) Auto White Balance: Used in protein gel mode. If the color of the captured protein gel is incorrect, remove the sample from the white sample tray, leaving only the tray, and click to perform white balance on the camera.

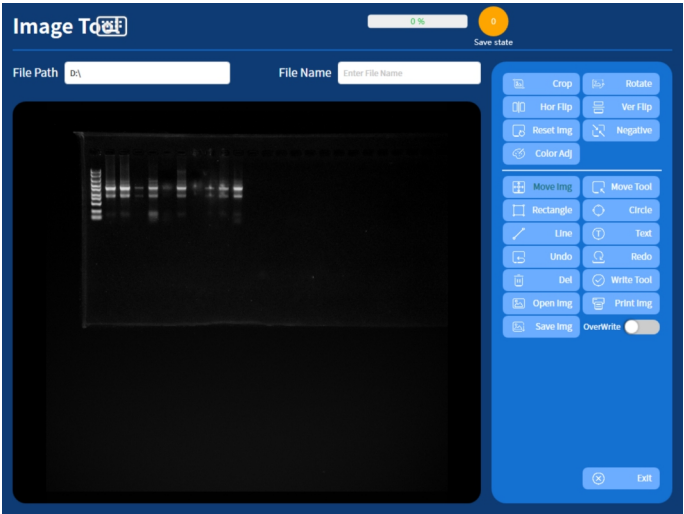
2. Image Tools Function



Click the "Image Tools" button below to enter the image tools interface, which mainly includes image operations and annotation tools. You can import images by selecting the folder where the images are saved in the file path area above to operate on the images.

Image operations include: Crop / Rotate / Flip Horizontal / Flip Vertical / Restore / Negative / Color Adjustment

(1) Crop: Click the crop button, select the area of interest on the image, double-click the image to crop the selected area;



Original Image



After Cropping

- (2) Rotate: Click the rotate button, a slider for angle will appear on the right, allowing you to rotate the image;
- (3) Hor Flip(Horizontal Flipping): Click the flip horizontal button to mirror the image horizontally;
- (4) Ver Flip(Vertical Flipping): Click the flip vertical button to mirror the image vertically;



Image Rotate



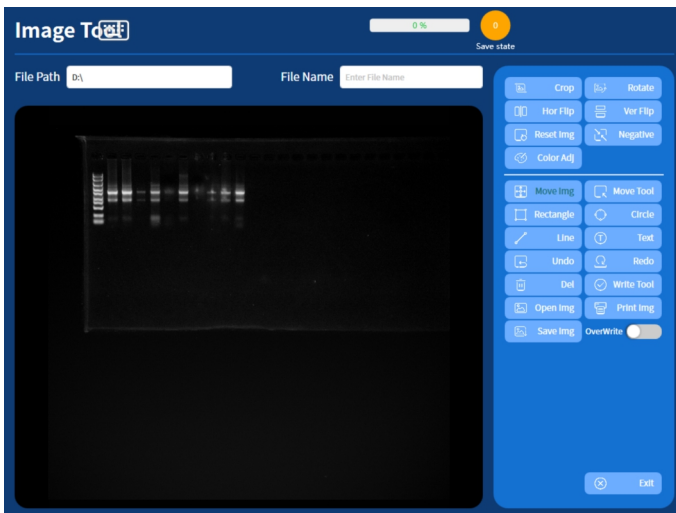
Horizontal Flipping



Vertical Flipping

(5) Reset Img(Reset Image): If unsatisfied with previous image operations, click the Reset Img button to revert the image to its original state;

(6) Negative: Inverts the grayscale colors of the image;

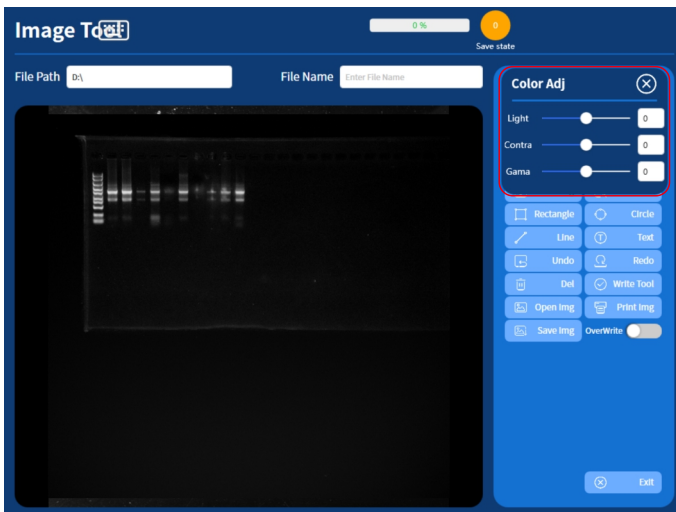


Original Image



Negative Image

(7) Color Adj (Color Adjustment): Adjusts the brightness, contrast, and gamma value of the image.



2. Annotation tools include: Move Image / Move Tool/ Rectangle Annotation / Circle Annotation / Line Annotation / Text Annotation / Undo Annotation / Redo Annotation / Delete Annotation/ Burn Annotation / Open Image / Print Image / Save Image / Overwrite Original

(1) Move Img: Used to move and zoom the entire image. Hold the left mouse button and drag to move the entire image. In this state, scroll the mouse wheel to zoom in/out;

- (2) Move Tool: Used to move rectangle, circle, line, and text annotations on the image. Press the left mouse button and drag the target annotation. In this state, scroll the mouse wheel to zoom in/out;
- (3) Rectangle: Draws a rectangle on the image. Press the left mouse button as the starting point and drag. Release the left mouse button to set the end point;
- (4) Circle: Draws a circle/ellipse on the image. Press the left mouse button as the starting point and drag. Release the left mouse button to set the end point;



Rectangle Annotation



Circle Annotation

- (5) Line: Draws a line on the image. Press the left mouse button as the starting point and drag. Release the left mouse button to set the end point;
- (6) Text: Adds a text box and inputs text on the image. Click the text tool button, a text edit box appears at the bottom of the software. Input text in the edit box. After inputting text, you can press and drag the text on the image with the mouse;



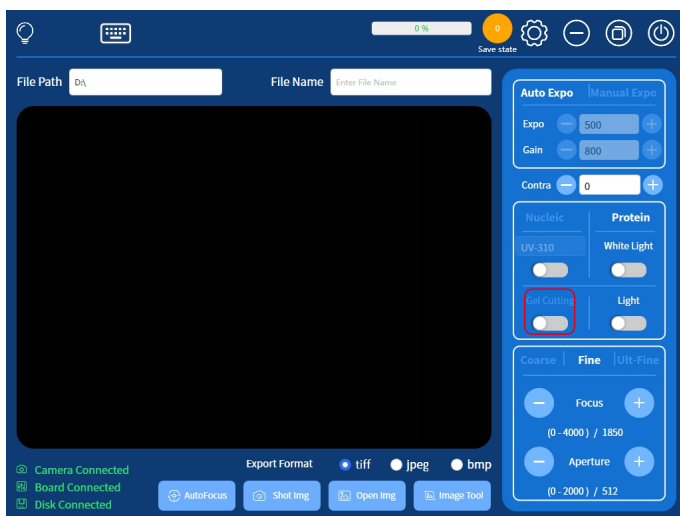
Line Annotation



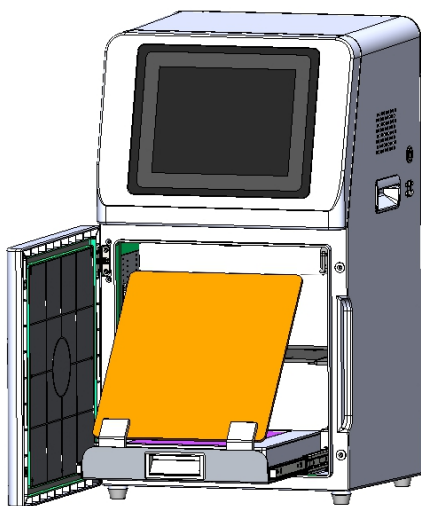
Text Annotation

- (7) Undo: Click to undo the last annotation step;
- (8) Redo: Click to redo the last annotation step;
- (9) Delete: In "Move Tool" mode, select the annotation to delete and click the delete tool to remove it;
- (10) Write Tool: After finishing annotations, if you need to merge the annotations into the image so they are visible with standard image viewers and no longer editable, select Write Tool;
- (11) Open Img: Used to open an image. Annotated images will display the annotations;
- (12) Print Img: Click to pop up the system's print page, select a connected printer to print the image;
- (13) Save Img: Saves the image after annotation, but annotations are not merged into the image at this time. Annotations saved this way are only visible when opened with this software;
- (14) Overwrite: When enabled, saving an image will overwrite the original file.

6.1.3 Gel Cutting



1. Open the instrument door, the UV light source automatically turns off;
2. Pull out the UV light source drawer. Place the UV protection plate diagonally between the drawer and the instrument to shield the eyes from the UV light;
3. Click the "Gel Cutting" button. The UV light source turns on, allowing you to observe the nucleic acid gel bands and perform the gel cutting action.



Gel Cutting

6.1.4 Optional Accessory: Blue-white Light Transilluminator

1. Power the Blue-white Light Transilluminator using its adapter.



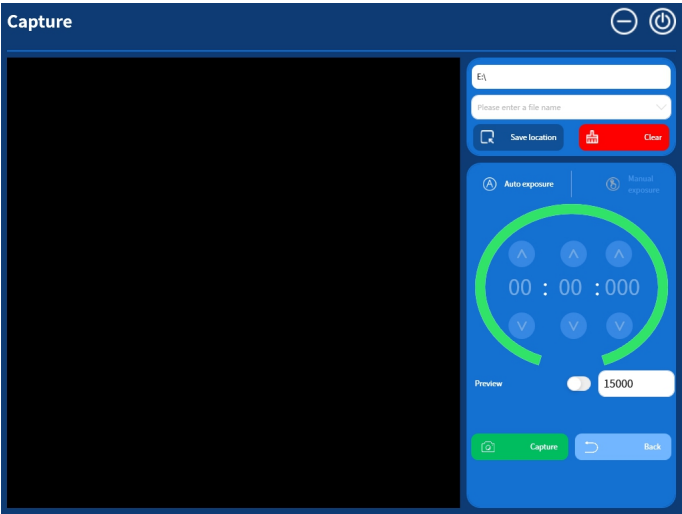
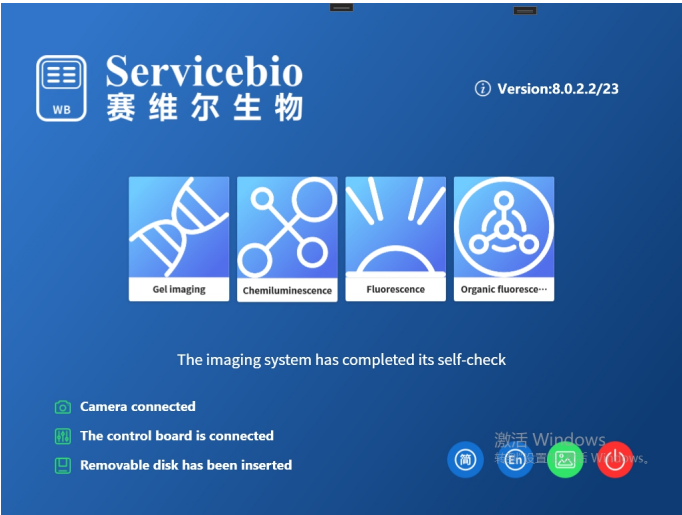
Blue-white Light Transilluminator

2. Place the nucleic acid gel on the sample tray. Place the tray onto the transilluminator stage. Press the blue light button to observe the nucleic acid gel bands.

6.2 Chemiluminescence Imaging Capture

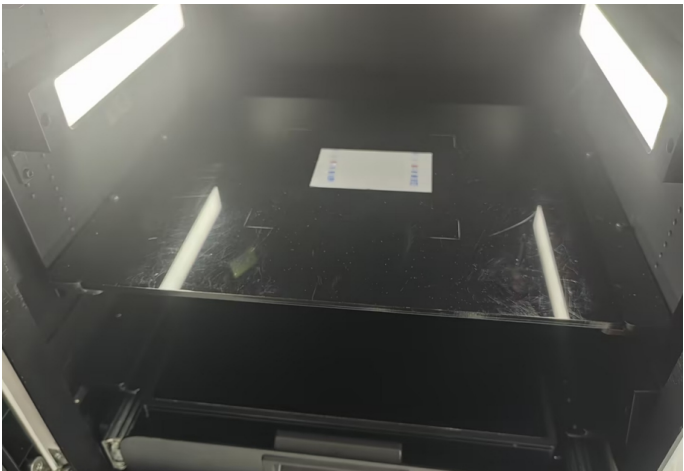
6.2.1 Main Capture Procedure

(1) Plug in the power cord at the back, press the power switch on the side. After powering on, the software will start automatically. Once startup is complete, click "Chemiluminescence" to enter the capture page.



Open software and enter Chemiluminescence module

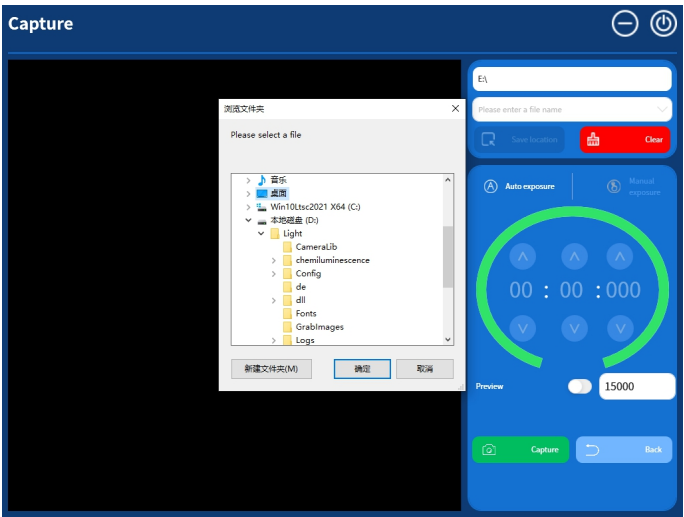
(2) Open the instrument door, take out the black sample tray. Place the prepared sample on the tray. Then place the tray flat into the groove inside the instrument's dark box. Close the instrument door.



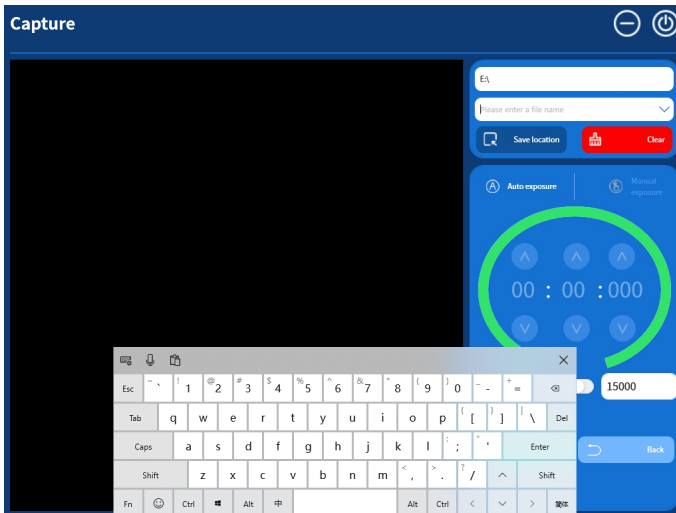
Load WB Blot Membrane

(3) Set file save path and name

Click the "Storage Location" button to select the result save path. Click the blank box "Please enter file name" and enter the name for the saved results. Subsequent saved results will use this name as a prefix and the capture time as a suffix for default naming.



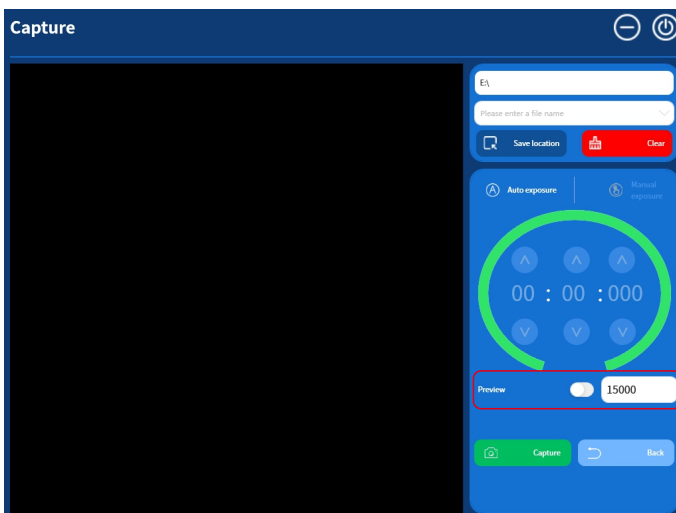
a. Select Storage Location



b. Enter File Name

(4) Preview

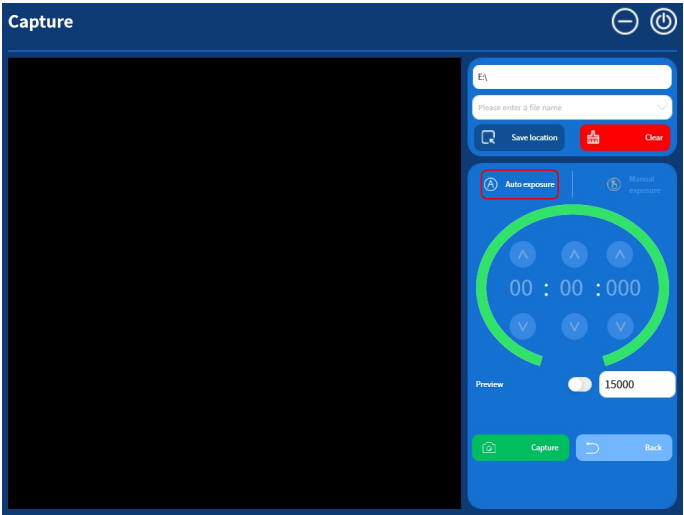
You can enter a time on the right side of preview, in microseconds (us). This time is also the exposure time for the brightfield image. Click the preview switch to enable preview, change the preview time as needed.



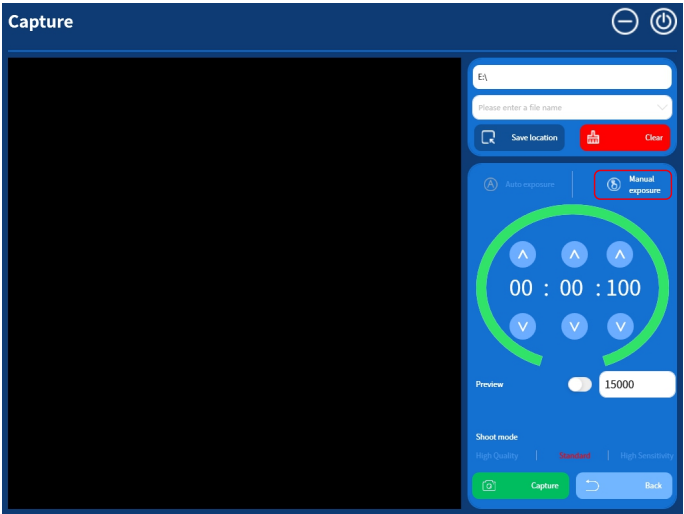
(5) Select Exposure Mode – Capture (default Auto Exposure)

a. When Auto Exposure is selected, the software automatically calculates a suitable exposure time. Simply click the "Capture" button to start exposure.

b. When Manual Exposure is selected, you need to manually enter the desired exposure time and select the capture mode (High Quality, Standard, High Sensitivity). Subsequent manual exposures will default to the last selected mode. After setting the exposure time and capture mode, click the "Capture" button to start exposure.



Auto Exposure

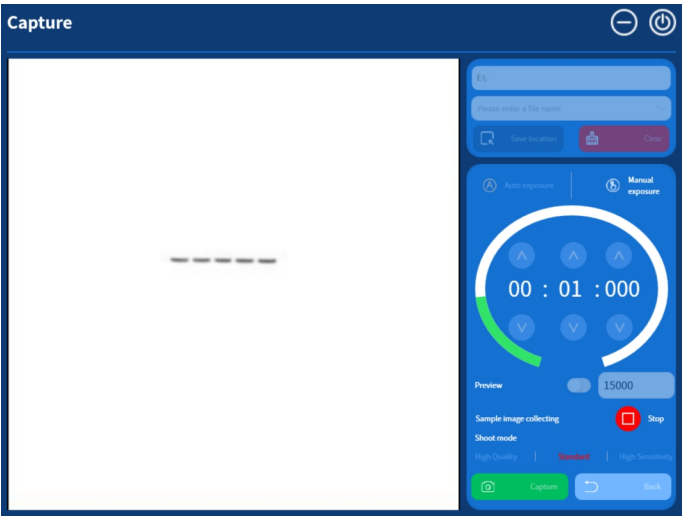


Manual Exposure

- High Quality: Produces the best image quality.
- Standard: Balances image quality and capture time.
- High Sensitivity: Has the shortest capture time.

(6) Real-time Imaging

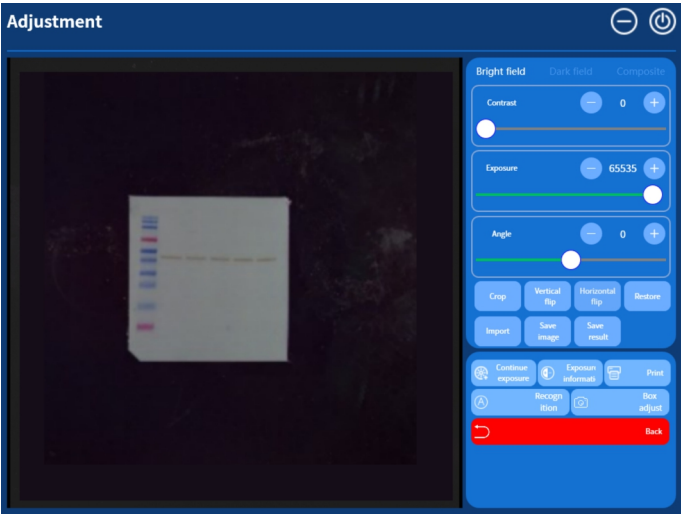
After exposure starts, the left side displays signal changes of the sample during exposure in real-time, allowing users to master every detail of the capture process. During exposure, if the user determines the bands are satisfactory, they can click the "Stop" button in the lower right corner to end the exposure early.



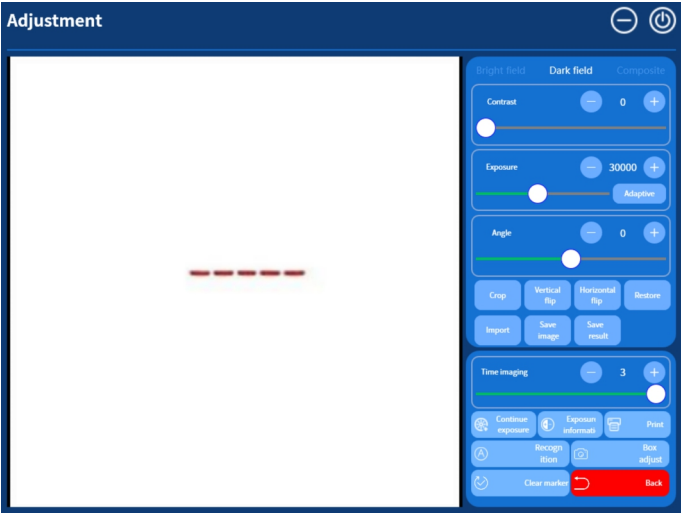
Real-time Exposure Page

(7) Results Page

After exposure completes, it automatically jumps to the results page, where results can be processed and saved.



Brightfield Image



Darkfield Image

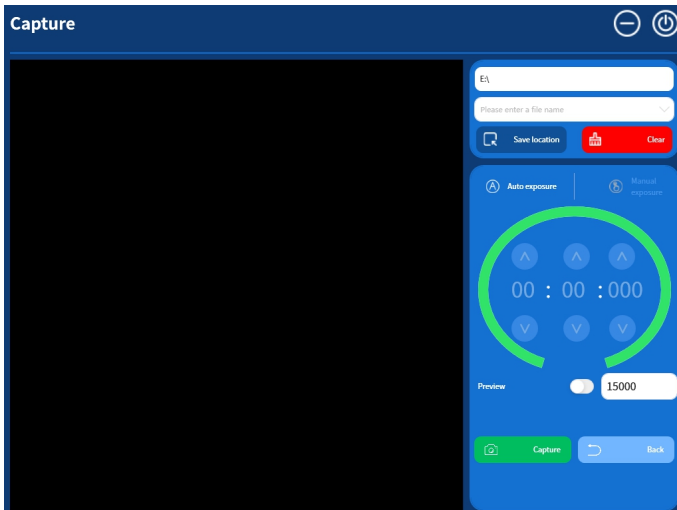


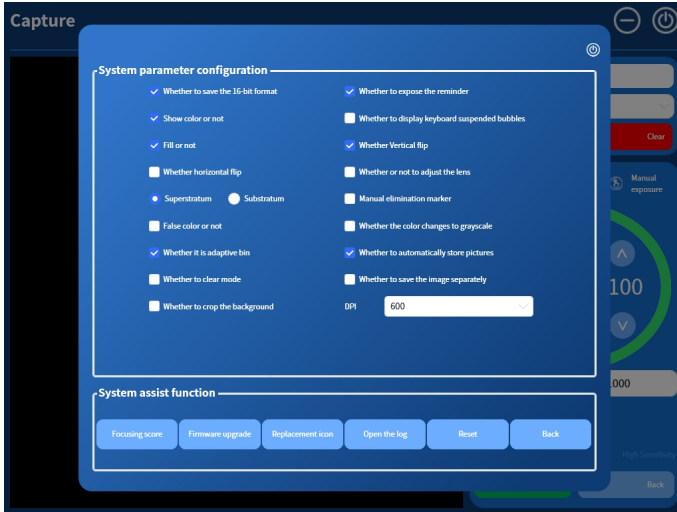
Merged Image

6.2.2 Function Modules

1. Parameter Configuration Function

Click the blank area at the top to pop up the system parameter configuration window.

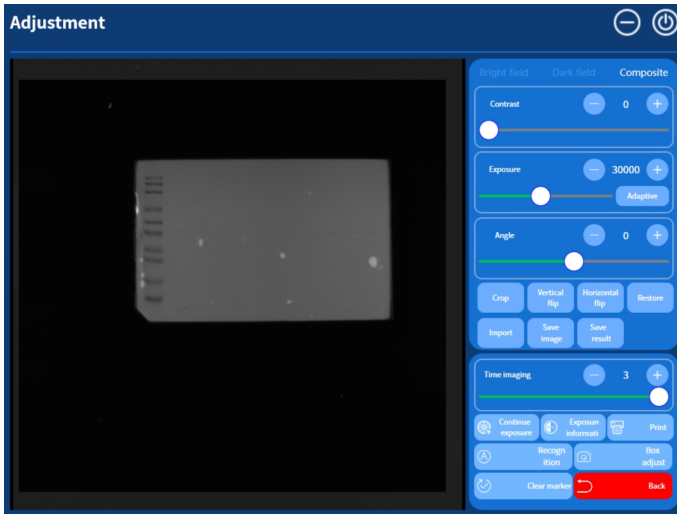




- (1) Save 16-bit format: When checked, images are saved in 16-bit format; when unchecked, saved in 8-bit format (color images can only be saved in 8-bit);
- (2) Show Shot Img: When checked, brightfield images are color; when unchecked, brightfield images are grayscale.

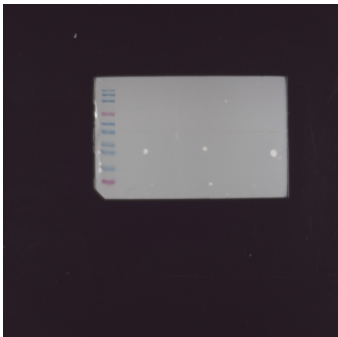


Color (checked)

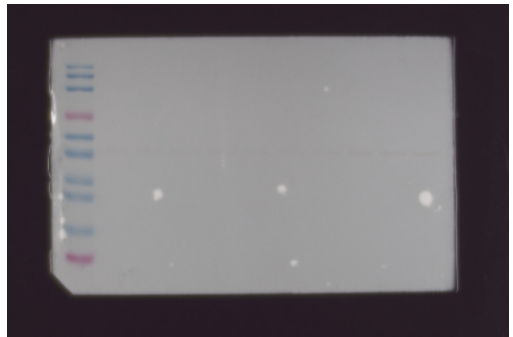


Grayscale (unchecked)

(3) Fill – When checked, after cropping, the saved image will paste the crop onto a black background;



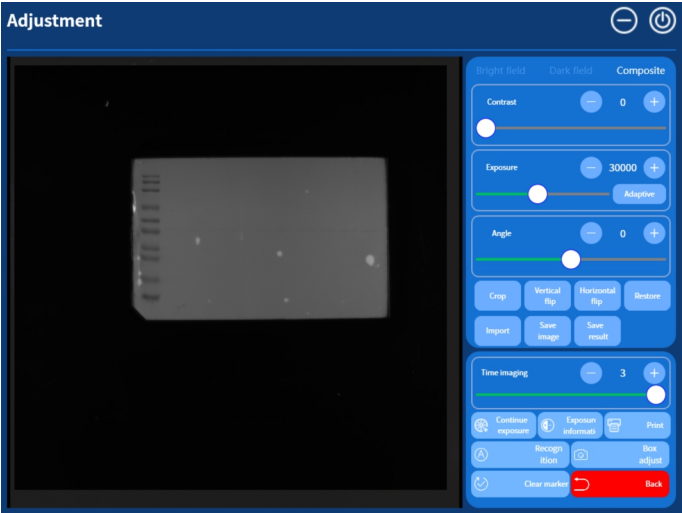
Fill (checked)



No Fill (unchecked)

(4) Manual Marker Removal: After positioning and identifying markers, you can manually draw a box within the recognition range to remove;

(5) Convert Color to Grayscale: Opens color results and displays them in monochrome;



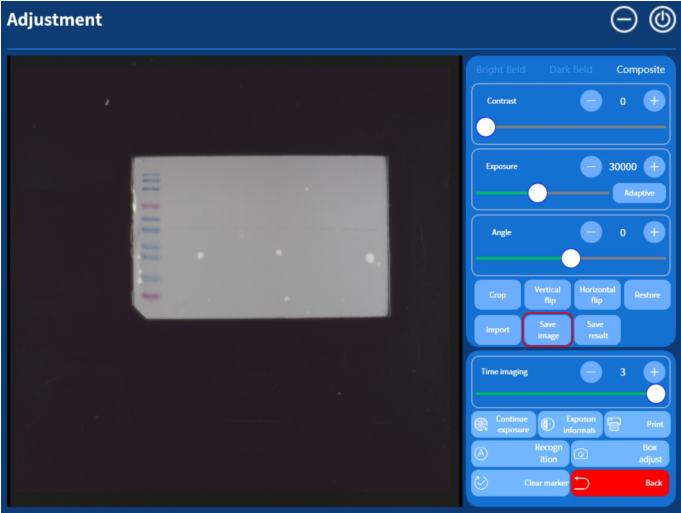
Grayscale (checked)



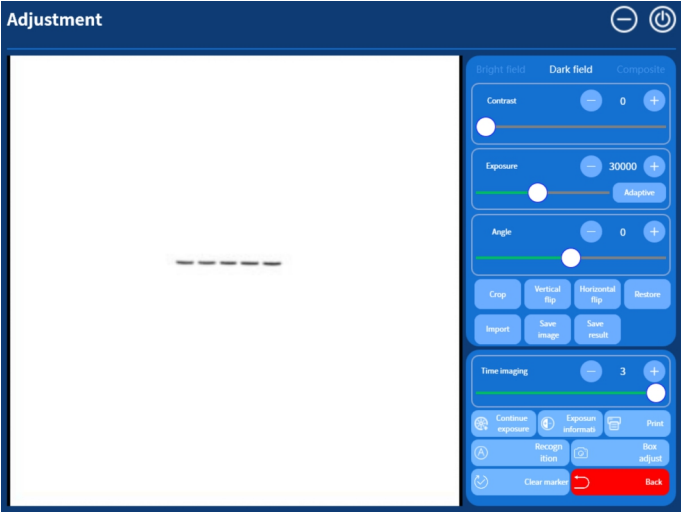
Color (unchecked)

(6) Auto Save Images: When checked, clicking "Save Result" on the results page automatically saves images to the same directory;

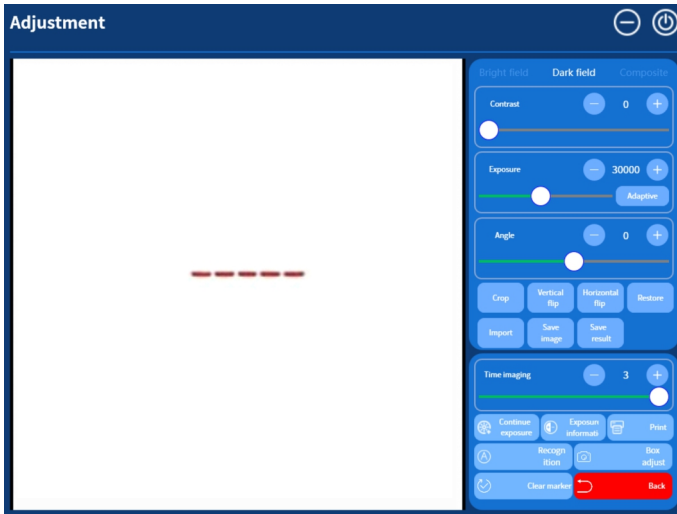
(7) Save Images Separately: When checked, you can individually choose to save brightfield/darkfield/composite images. On the results page, click on the desired channel image (brightfield/darkfield/composite), then click Save Image;



(8) Overexposure Reminder: When checked, overexposed areas in the darkfield image turn red;

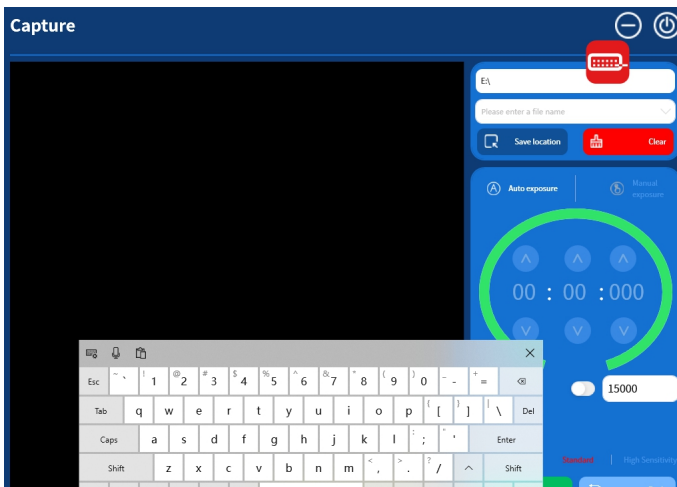


Fill (Checked)

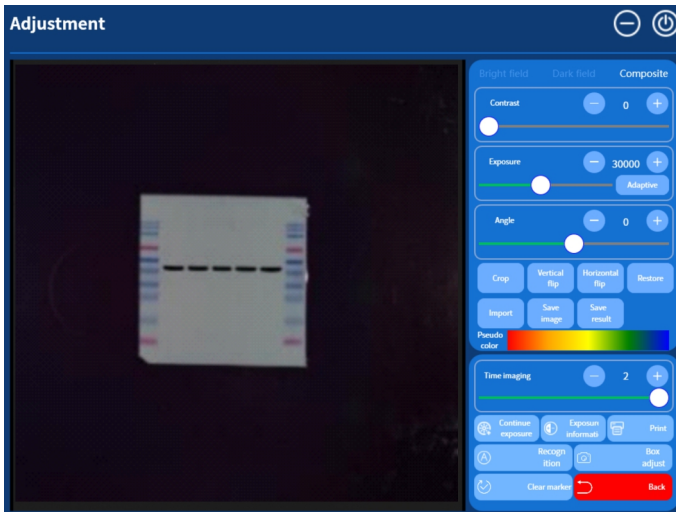


No Fill (Unchecked)

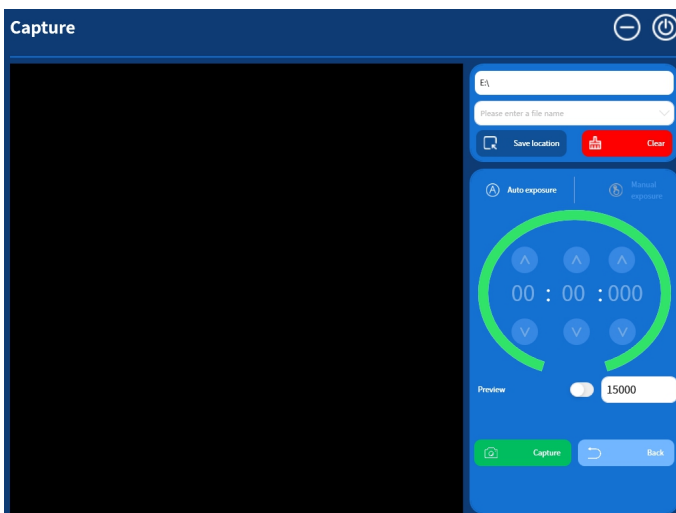
(9) Show Keyboard Floating Bubble: Displays a floating "G" box; double-click to show the system keyboard;



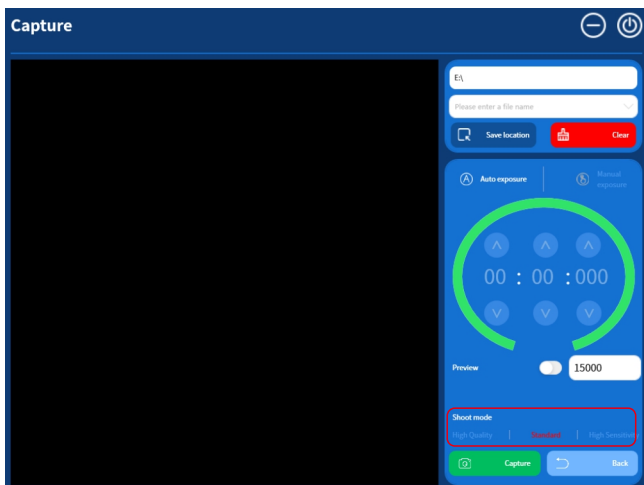
(10) Show Pseudocolor: Displays a heatmap of signal areas; multiple modes available;



(11) Auto Adaptive Binning: When checked, during auto exposure the AI algorithm automatically selects the most suitable bin and corresponding exposure time to speed up capture. When unchecked, exposure mode selection is available during auto exposure;



Auto Adaptive Binning (checked)



No Auto Adaptive Binning (unchecked)

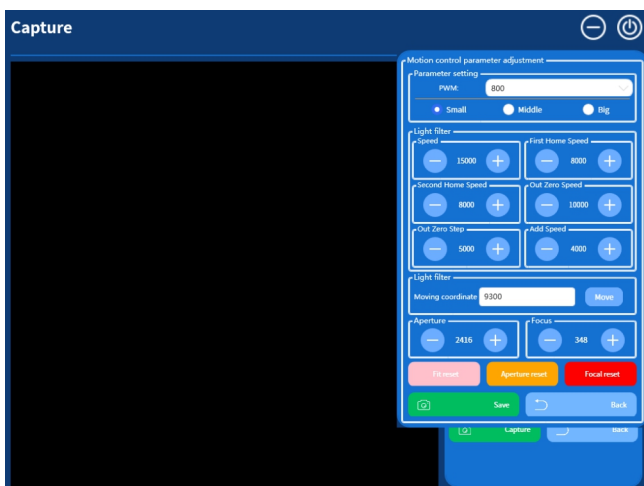
(12) Sharp Mode: When checked, images have less graininess and appear sharper;

The following parameters have been set during factory debugging and are not recommended for modification.

(13) Vertical Flip: When checked, flips the image vertically. If the displayed image is upside down relative to the actual object placement, check/uncheck to adjust;

(14) Horizontal Flip: When checked, flips the image horizontally. If the displayed image is mirrored relative to the actual object placement, check/uncheck to adjust;

(15) Adjust Lens: When checked, pops up the lens parameter setting window for adjustment.



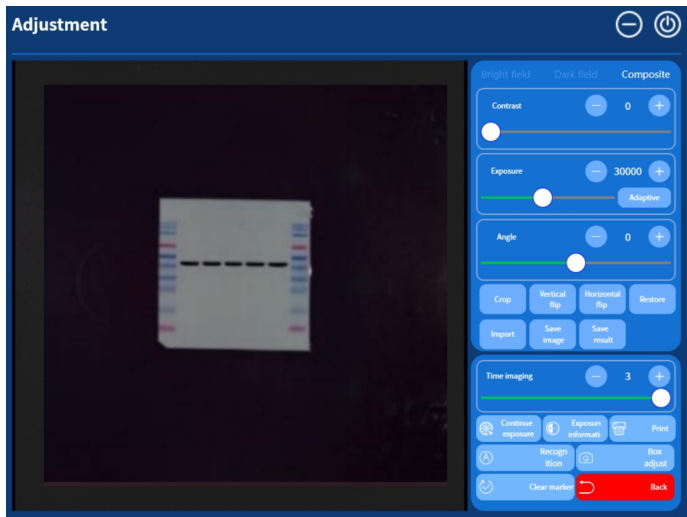
2. Results Page Functions

After exposure ends, the software automatically enters the results page, where you can adjust the captured results.

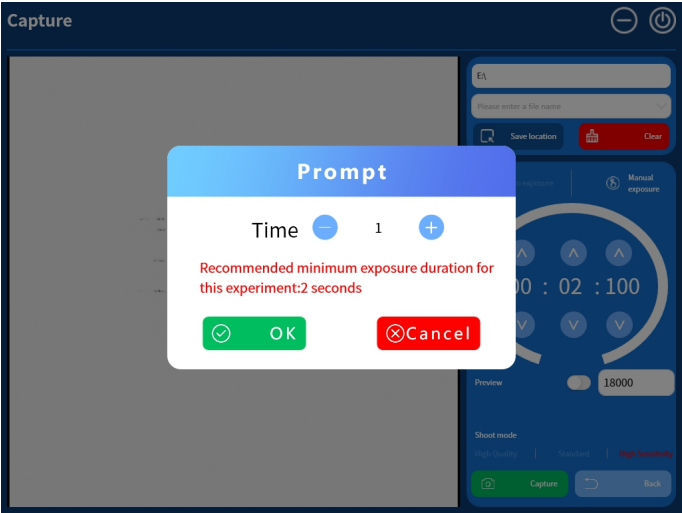


Results Page

(1) Temporal Imaging: Drag the timeline knob or click the "+/-" buttons next to "Time Imaging" to select any frame within the exposure time as the final output;

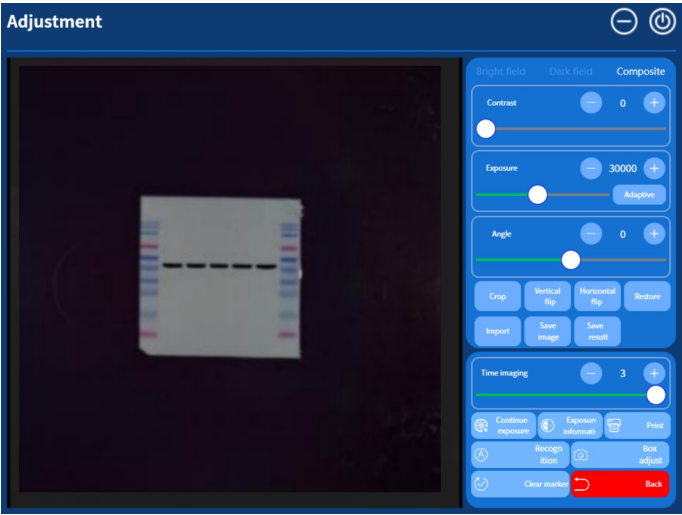


(2) Time Accumulation: Even after exposure ends, users can choose to continue exposure, allowing the sample to receive additional exposure on top of the already accumulated time. When clicking Continue Exposure, a minimum exposure time is prompted; the set time must be longer than this. If set shorter, the actual exposure time will be the prompted minimum.

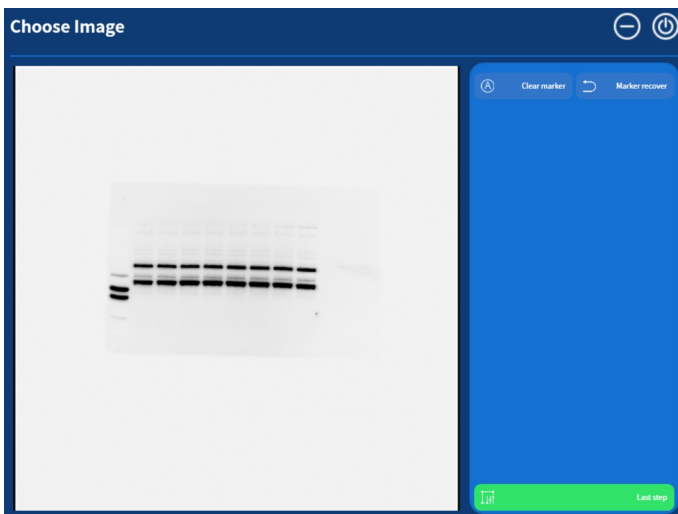


Time Accumulation interface

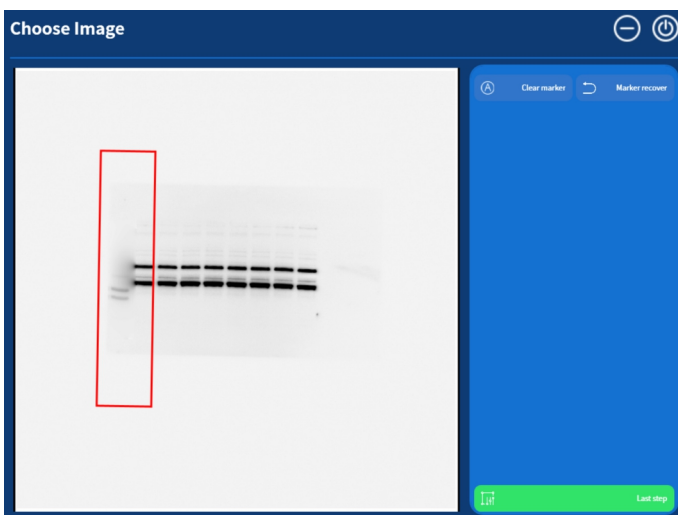
(3) Marker Removal



When spurious signal bands appear on markers, you can remove them with one click in the composite image on the results page, without needing to prepare new samples.



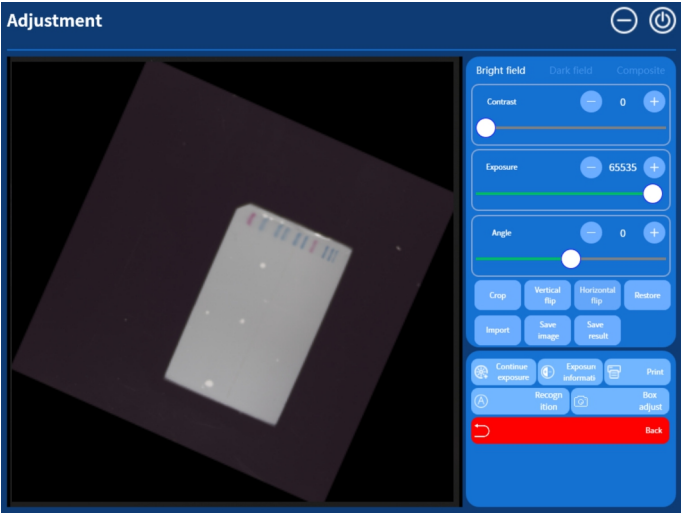
Before Marker Removal



After Marker Removal

After obtaining satisfactory images via continue exposure or temporal imaging, you can adjust the images on the results page.

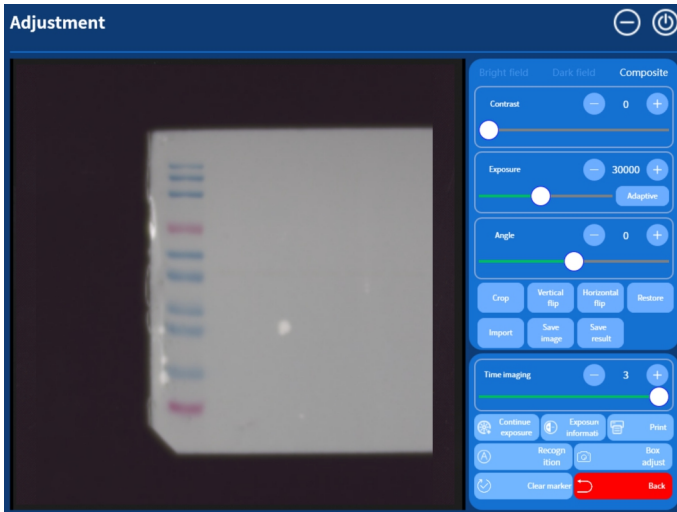
- (4) Contrast: Slide the contrast knob to adjust the contrast of the brightfield image;
- (5) Exposure: Slide the exposure knob to adjust the intensity of the darkfield image. Click "Auto" to recommend the most suitable value;
- (6) Angle: Slide the angle knob to rotate the image;



(7) Crop: Manually box the region of interest to crop the image;



Original Image



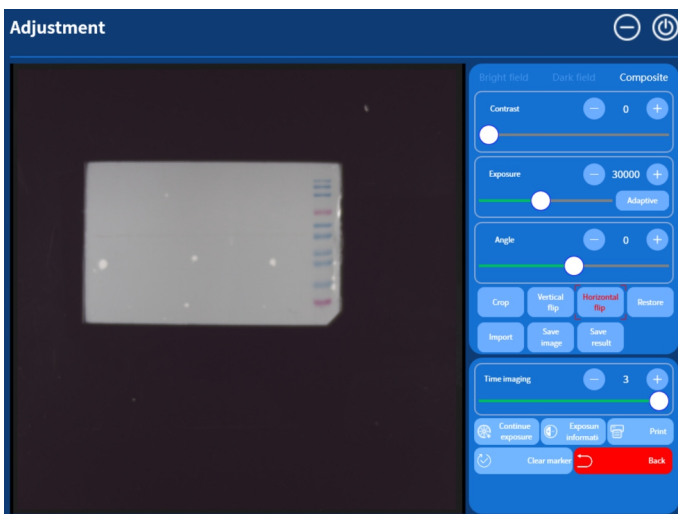
After Crop

(8) Vertical Flip: Click to flip the image vertically;

(9) Horizontal Flip: Click to flip the image horizontally;



Vertical Flip



Horizontal Flip

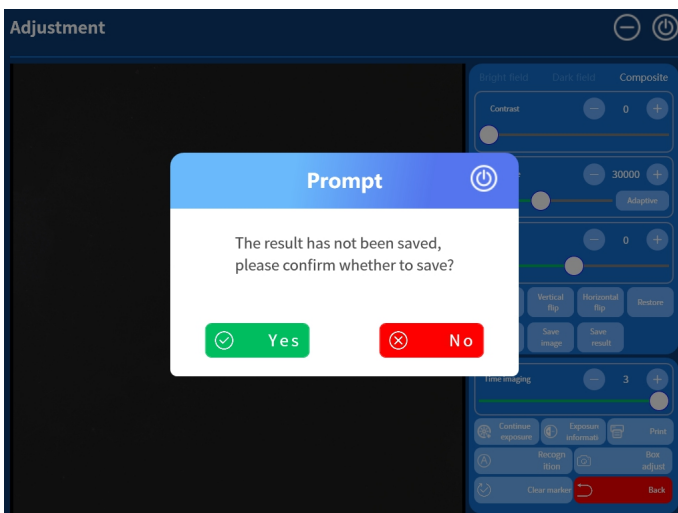
(10) Restore: Restores the original image;

(11) Import: Select files automatically saved by the software to import them for further operation;

(12) Save Image: Saves the image, simultaneously saving brightfield, darkfield, and composite images;

(13) Save Result: Saves the adjusted image as an encrypted file;

If you have made changes to the image on the results page and click Return, the system will prompt whether to save the image.

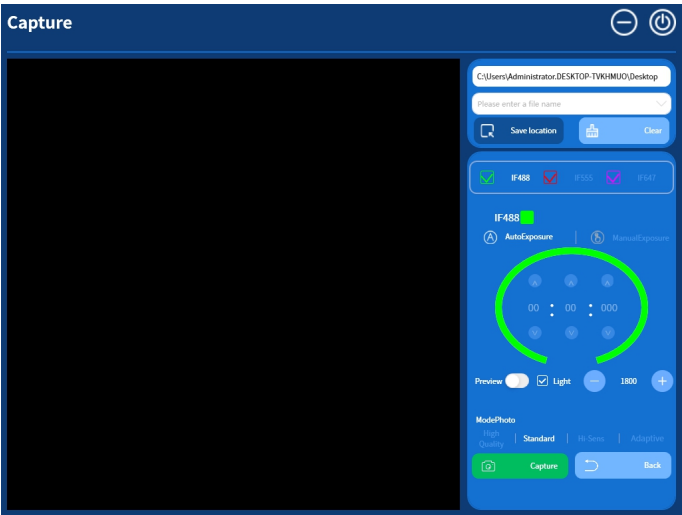
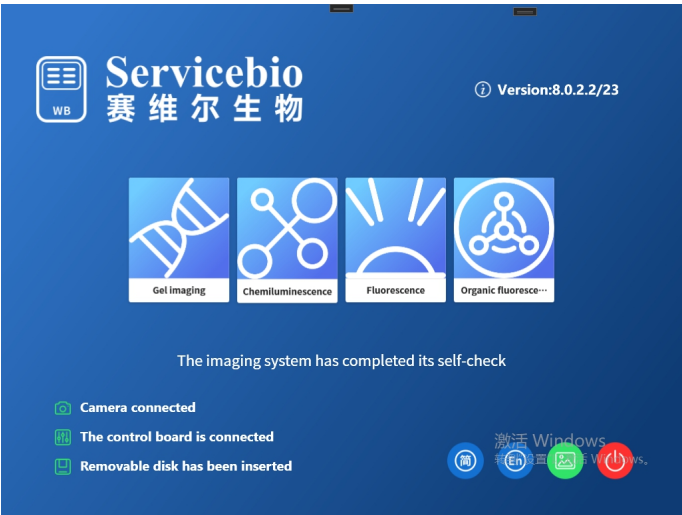


Result Save Interface

6.3 Membrane Fluorescence Imaging Capture

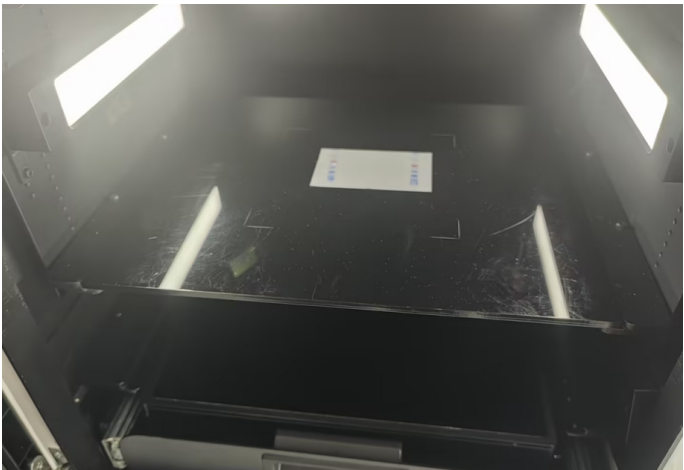
6.3.1 Main Capture Procedure

(1) Plug in the rear power cord and press the side power switch. After the instrument is powered on, the software will start automatically. Once startup is complete, click "Membrane Fluorescence Imaging" to enter the imaging interface;



Open the software and enter the membrane fluorescence imaging module

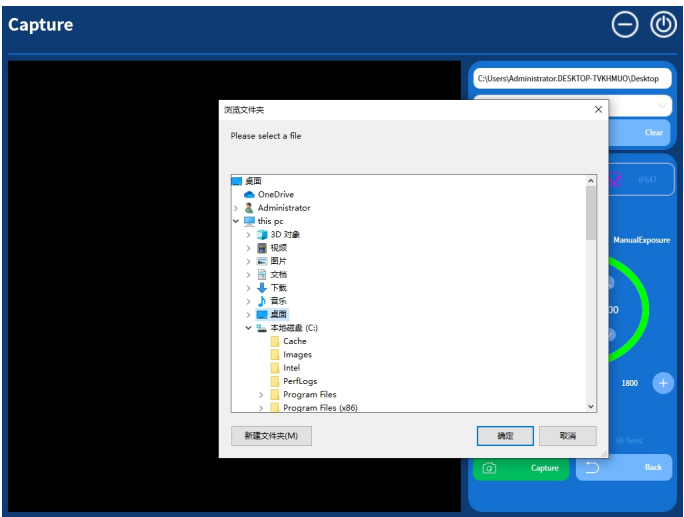
(2) Open the instrument door, take out the black sample tray, place the prepared sample on the tray, then lay the tray flat into the recess inside the instrument dark box. Close the instrument door;

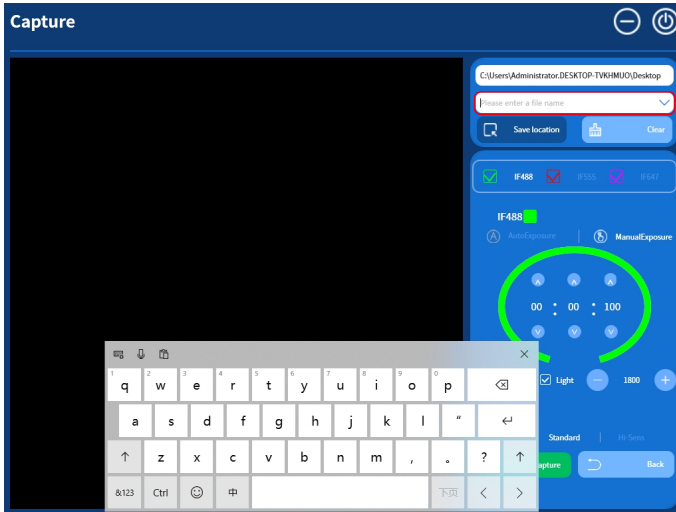


Load the WB Fluorescence Membrane

(3) Set the file save path and name

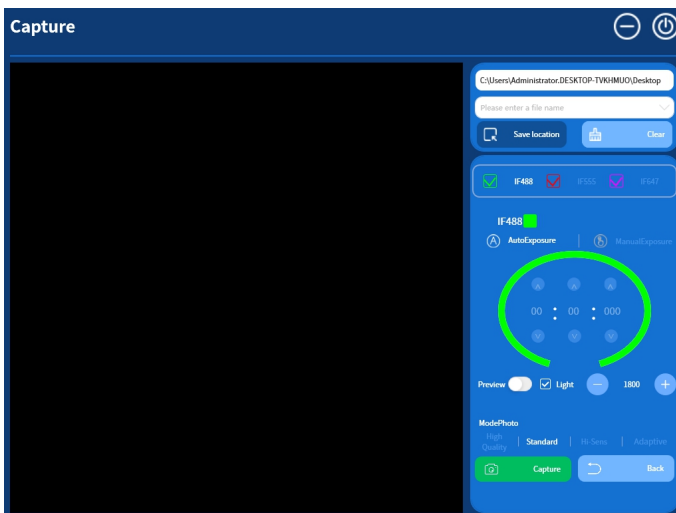
Click the "Storage Location" button to select the result save path; click the blank box of "Please enter the file name" and input the name prefix for the saved results. The subsequent saved results will use this name as the prefix and the shooting time as the suffix (default naming);



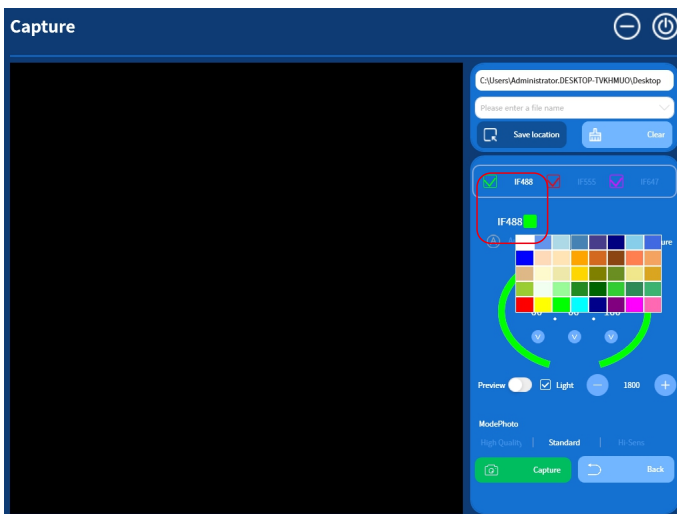


(4) Preview: On the right side of the preview, you can enter the time (unit: μ s). This time is also the exposure time for the bright field image. Click the preview switch to start previewing, and adjust the preview time as needed;

(5) According to the fluorescence type of the sample, check the fluorescence channels to be captured: IF488, IF555, IF647. Bright field image capture is checked by default; uncheck it if not needed;



(6) Select a fluorescence channel and click the corresponding color block below to choose the color to be displayed for that fluorescence channel;

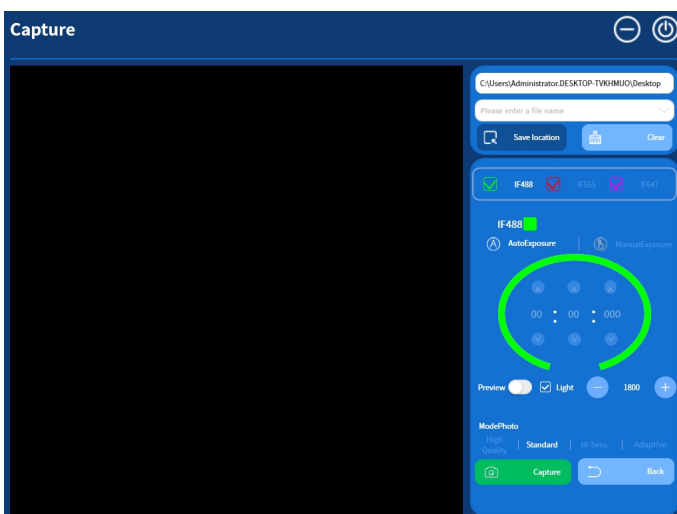


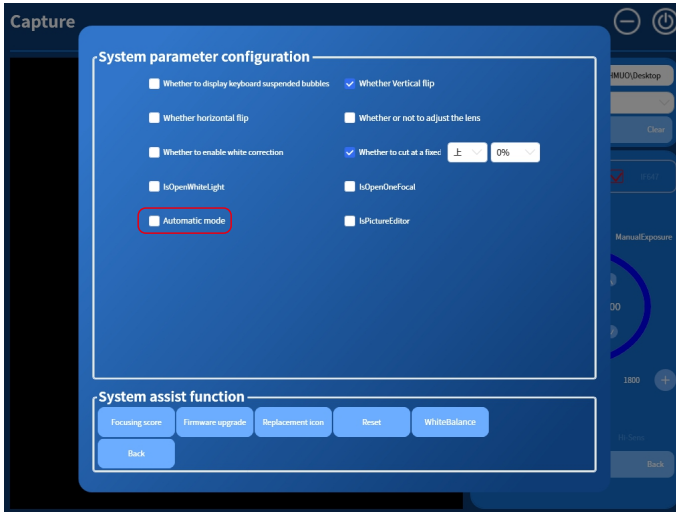
(7) Select the shooting mode — Capture (defaults to the last used mode)

Click the blank area at the top to pop up the system parameter configuration window, where you can select the shooting mode.

a. Check Auto Mode

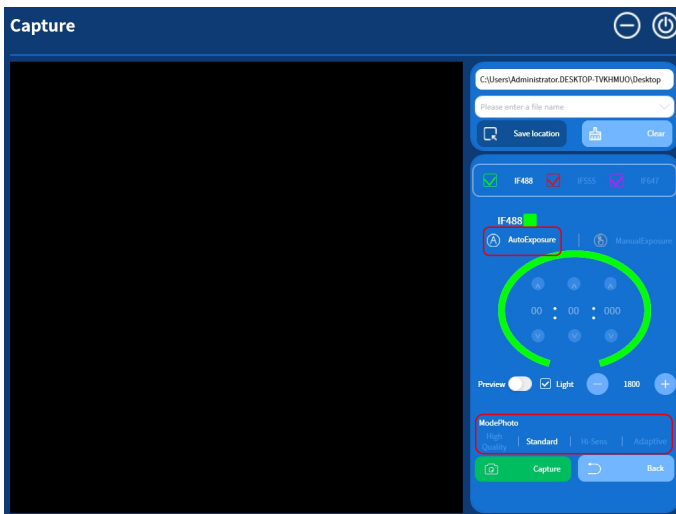
Automatically calculates imaging parameters; no additional settings required. Click "Capture" to start exposure. Shooting conditions: Auto exposure — Adaptive.



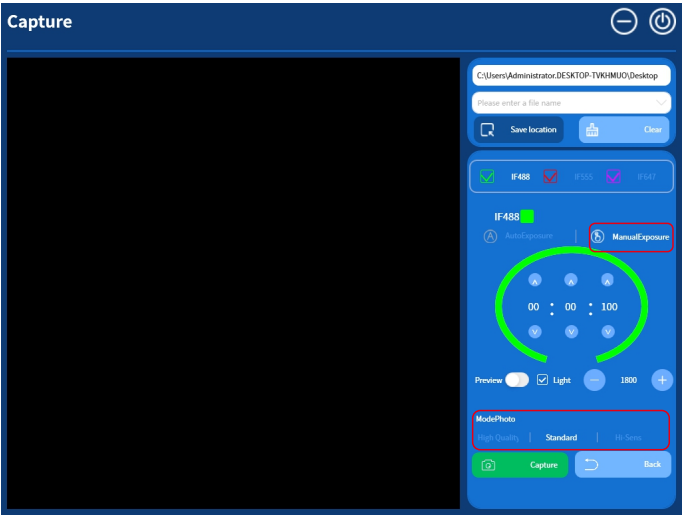


b. Manual Mode (Auto Mode unchecked)

You can set the shooting conditions for each fluorescence channel. First select the fluorescence channel to be set, then choose Auto Exposure — High Quality/Standard/High Sensitivity/Adaptive, or Manual Exposure — High Quality/Standard/High Sensitivity. After setting, click the "Capture" button to start exposure. (In Manual Mode, the default is Auto Exposure - Standard)



Auto Exposure



Manual Exposure

(8) Real-time imaging

Once exposure starts, the left side displays the fluorescence bands, and the right side shows the countdown of the exposure time. As the countdown proceeds, after each fluorescence channel is captured, the corresponding fluorescence bands are immediately displayed on the left.



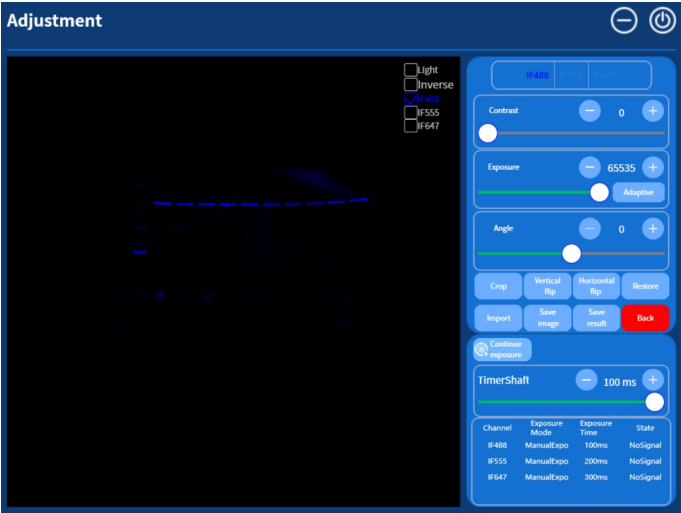
Real-time Imaging Interface

(9) Results page

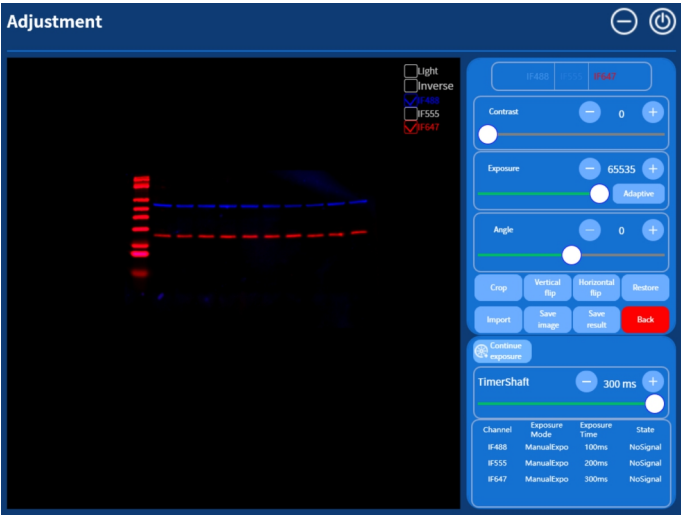
After exposure is complete, the interface automatically jumps to the results page, where the results can be processed and saved.



Inverted Color Image



Fluorescence Image

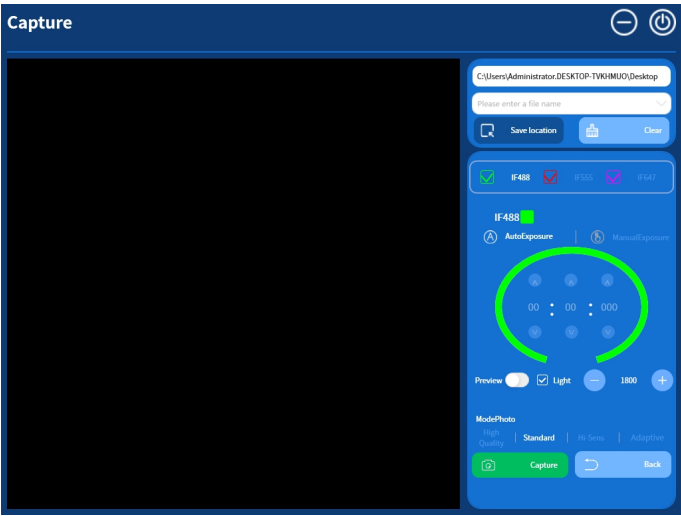


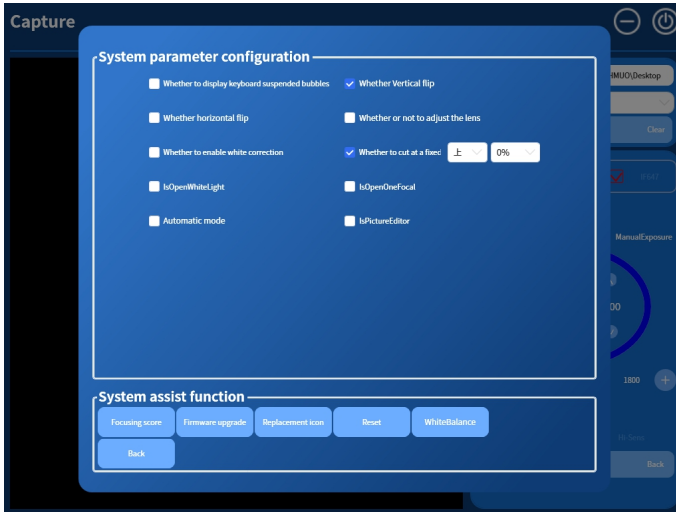
Composite Image

6.3.2 Function Modules

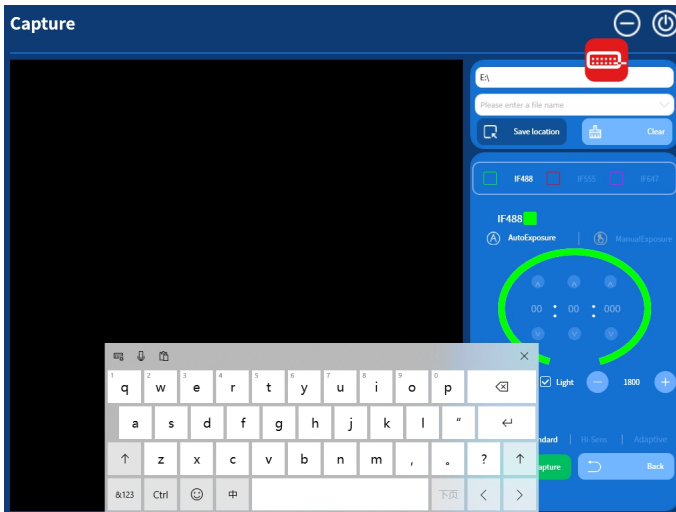
1. Parameter Configuration Function

Click the blank area at the top to open the system parameter configuration window.





(1) Show keyboard floating bubble: Displays a floating box G; double-click to open the system keyboard;



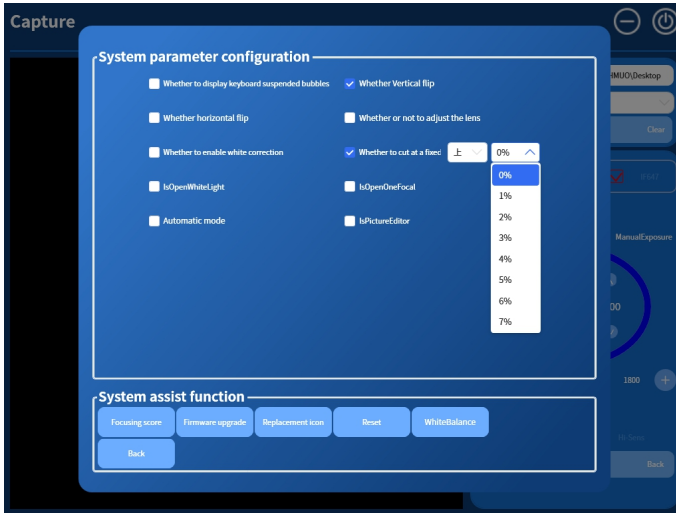
(2) Enable white correction: Corrects colors; only enable when capturing fluorescence membranes;

(3) Enable white light: When checked, the white light automatically turns on when the door is opened; if unchecked, the white light does not turn on when the door is opened;

(4) Auto mode: When checked, auto mode is enabled and shooting parameters are automatically calculated; no additional settings are required. Shooting conditions are fixed: Auto exposure – Adaptive. When unchecked, manual mode is enabled, allowing you to set shooting conditions for each fluorescence channel;

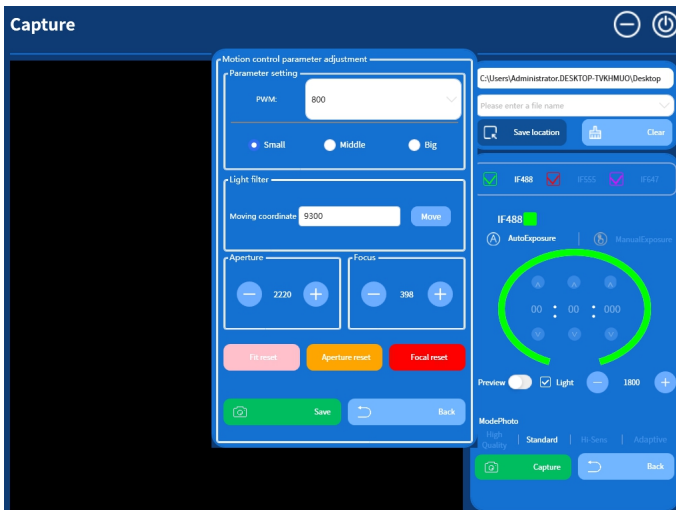
(5) Enable fixed crop ratio: When checked, you can select a crop ratio to change the field of view; when unchecked, no cropping is applied (full field of view);

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The following parameters have been calibrated before delivery and are not recommended to be modified:

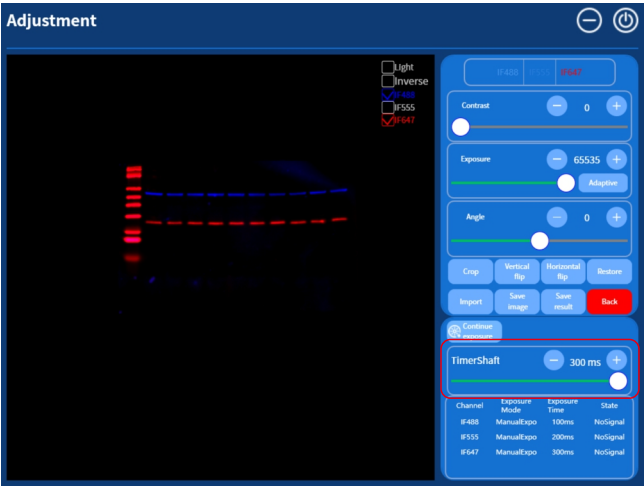
- (6) Enable vertical flip: When checked, the image is flipped vertically. If the displayed image is vertically inverted compared to the actual object placement, check/uncheck this option to correct it;
- (7) Enable horizontal flip: When checked, the image is flipped horizontally. If the displayed image is horizontally inverted compared to the actual object placement, check/uncheck this option to correct it;
- (8) Enable lens adjustment: When checked, a lens parameter setting window pops up, allowing you to adjust the lens.



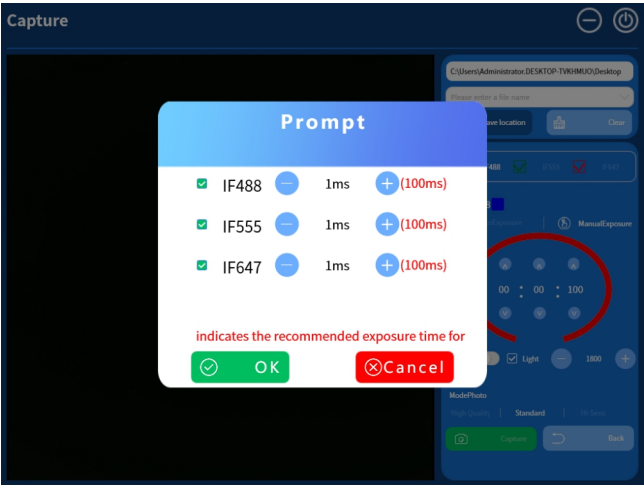
2. Results Page Functions

When exposure ends, the results page automatically opens, where you can adjust the captured images.

- (1) Temporal imaging: Drag the timeline to select any frame within the exposure time as the final output result;
- (2) Time accumulation: Even after exposure ends, you can continue exposing individual fluorescence channels to obtain additional exposure on top of the existing exposure time. First check the channel(s) that need continued exposure, then set the additional exposure time. A minimum exposure time is shown next to each channel; the set time must be longer than this minimum. If a shorter time is entered, the actual exposure time will be the indicated minimum exposure time.



Temporal Imaging



Time Accumulation

After obtaining satisfactory images through continued exposure and temporal imaging, you can adjust the images on the results page. (When adjusting, first select the corresponding fluorescence channel.)

(3) Contrast: Slide the contrast knob to adjust the contrast of the fluorescence image;



Minimum Contrast



Maximum Contrast

(4) Exposure: Slide the exposure knob to adjust the brightness of the fluorescence bands. Selecting "Adaptive" automatically adjusts to a suitable exposure brightness;



Minimum Exposure Value



Maximum Exposure Value

(5) Angle: Slide the angle knob to rotate the image;

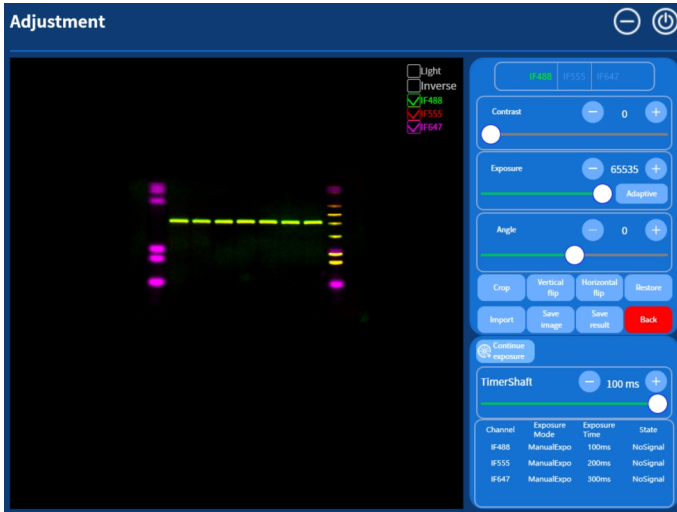


Original Image

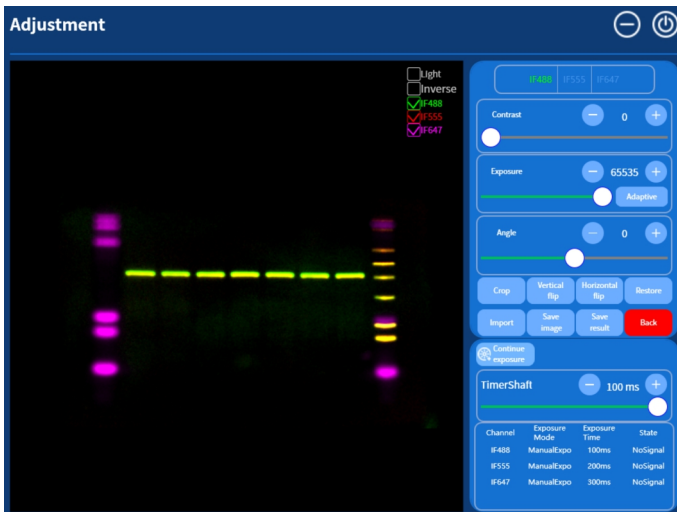


After Angle Adjustment

(6) Crop: Manually draw a region of interest to crop the selected area;

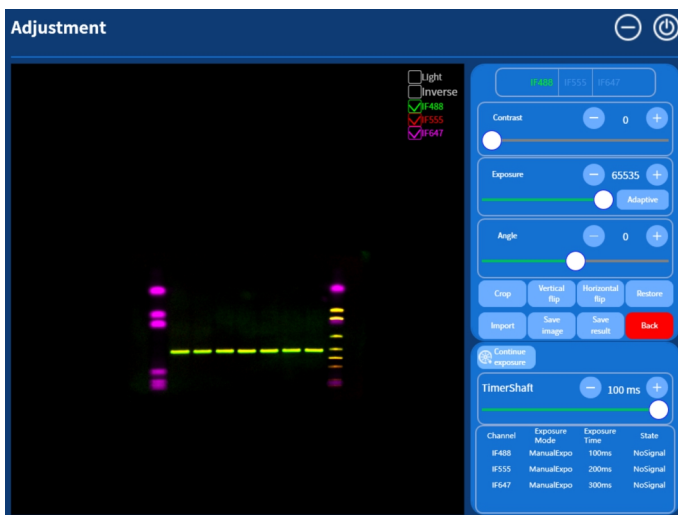


Original Image

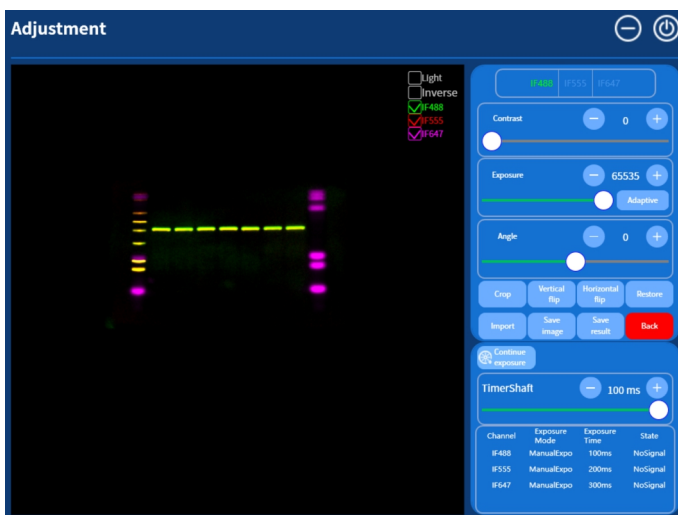


After Cropping

- (7) Vertical flip: Click to flip the image vertically;
- (8) Horizontal flip: Click to flip the image horizontally;



Vertical Flip

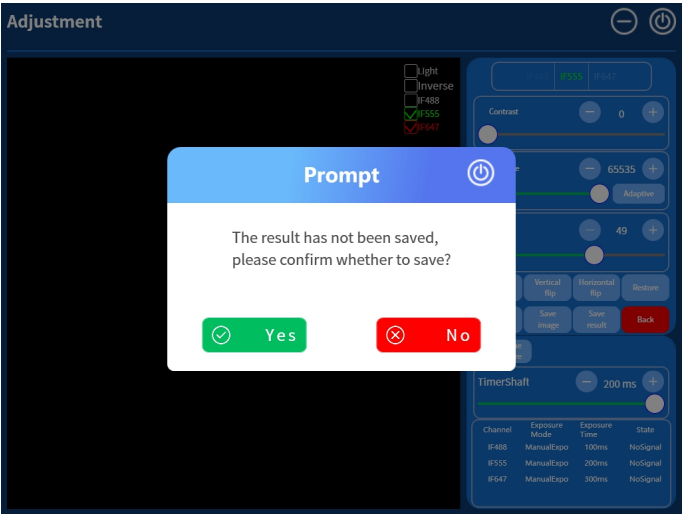


Horizontal Flip

- (9) Reset: Restore the image to its original state;
- (10) Import: Select a file automatically saved by the program to import it for further operations;
- (11) Save images: Save the images, including the bright-field image, inverted color image, fluorescence image, and composite image;
- (12) Save results: Save the adjusted images as an encrypted file.

If you do not click "Save results" and instead click "Back", the system will prompt you whether to "Save results". If the result meets your requirements, select "Yes" to save the result. If you want to re-expose to obtain a better result, select "No".

Save the result; if you want to re-expose to obtain a better result, select No.

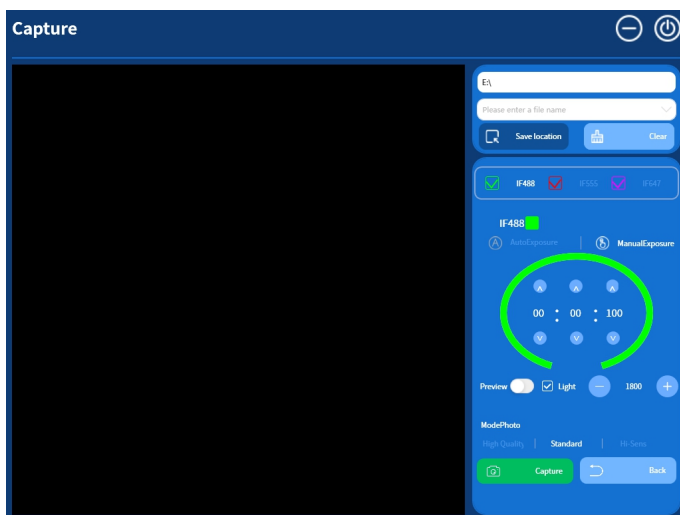


Result Saving Interface

6.4 Tissue Fluorescence Imaging Capture

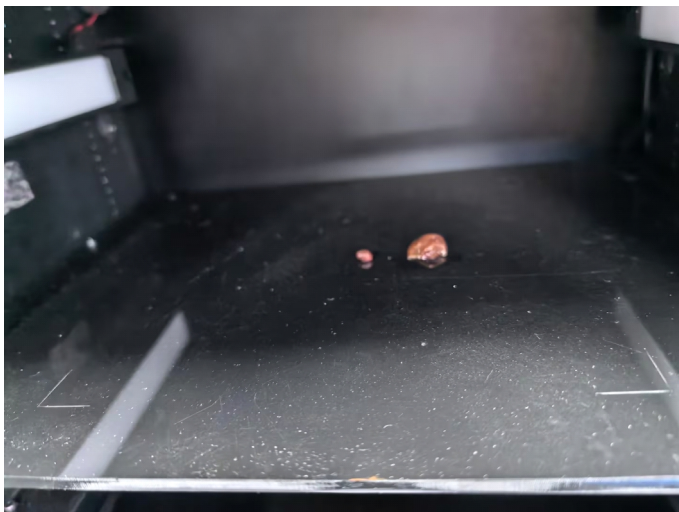
6.4.1 Main Capture Procedure

(1) Plug in the rear power cord and press the side power switch. After the instrument is powered on, the software will start automatically. Once startup is complete, click "Tissue Fluorescence Imaging" to enter the imaging interface;



Open the software and enter the tissue fluorescence imaging module

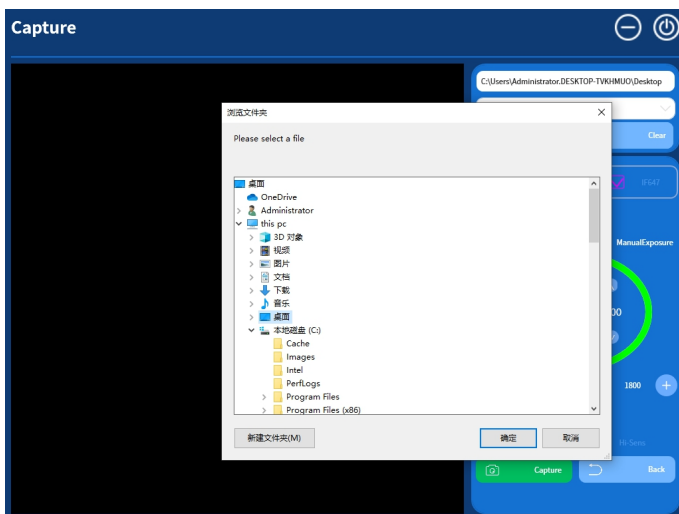
(2) Open the instrument door, take out the black sample tray, place the prepared fluorescent tissue on the tray, then lay the tray flat into the recess inside the instrument dark box. Close the instrument door;

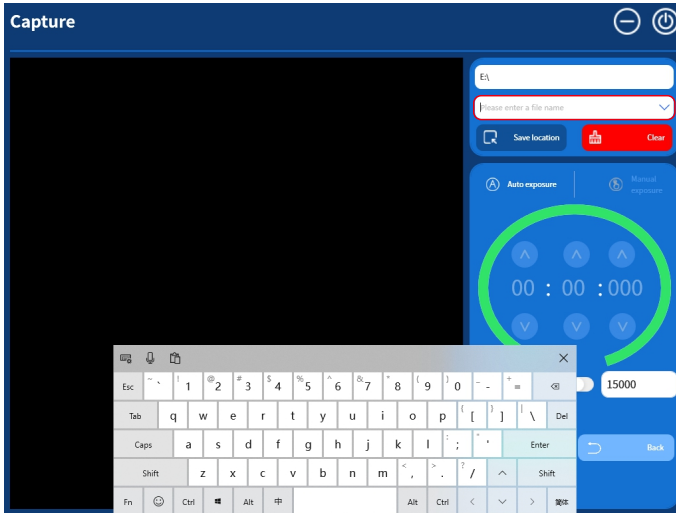


Load the Fluorescent tissue

(3) Set the file save path and name

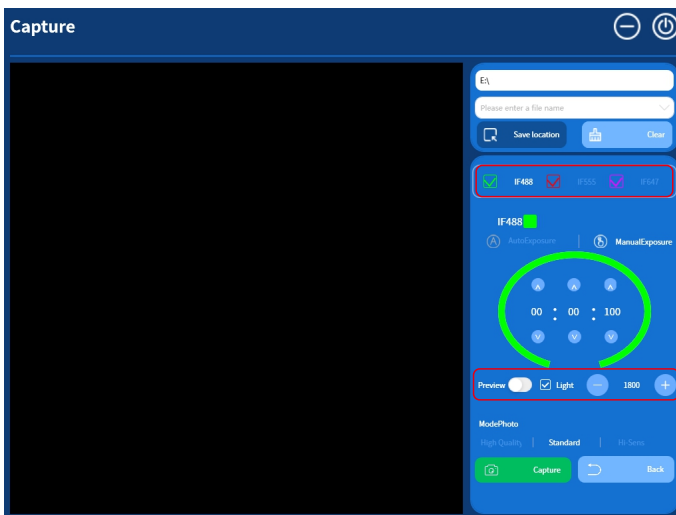
Click the "Storage Location" button to select the result save path; click the blank box of "Please enter the file name" and input the name prefix for the saved results. The subsequent saved results will use this name as the prefix and the shooting time as the suffix (default naming);



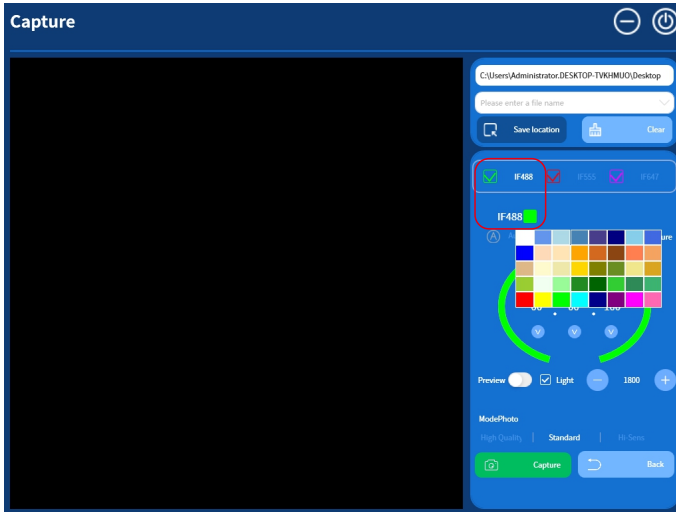


(4) Preview: On the right side of the preview, you can enter the time (unit: μs). This time is also the exposure time for the bright field image. Click the preview switch to start previewing, and adjust the preview time as needed;

(5) According to the fluorescence type of the sample, check the fluorescence channels to be captured: IF488, IF555, IF647. Bright field image capture is checked by default; uncheck it if not needed;

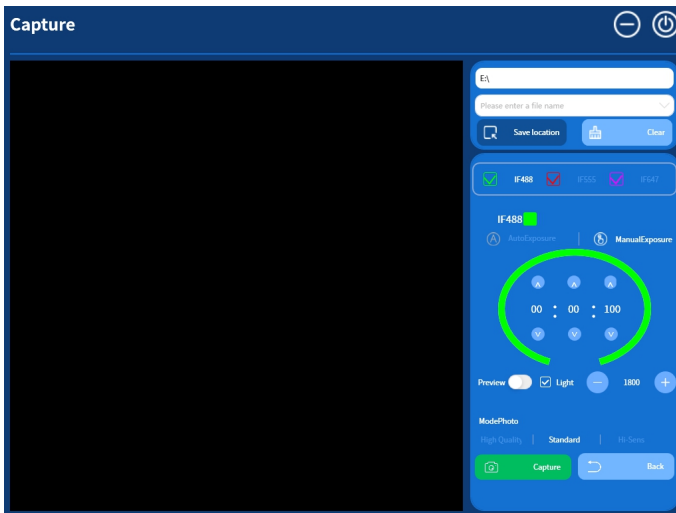


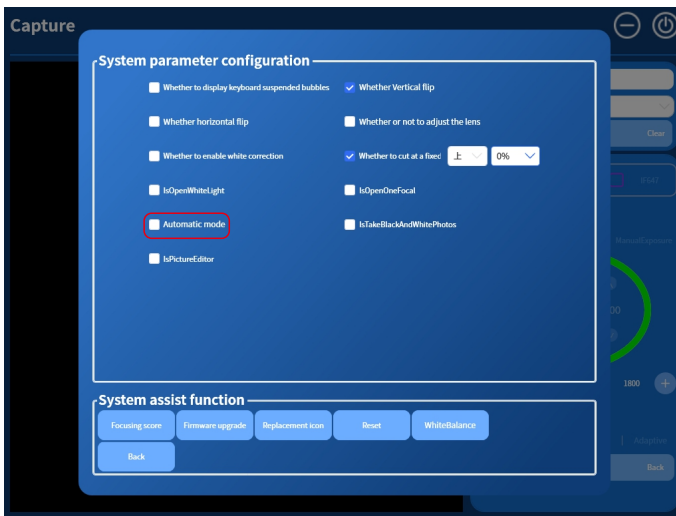
(6) Select a fluorescence channel and click the corresponding color block below to choose the color to be displayed for that fluorescence channel.



(7) Select the shooting mode — Capture (defaults to the last used mode)

Click the blank area at the top to pop up the system parameter configuration window, where you can select the shooting mode.



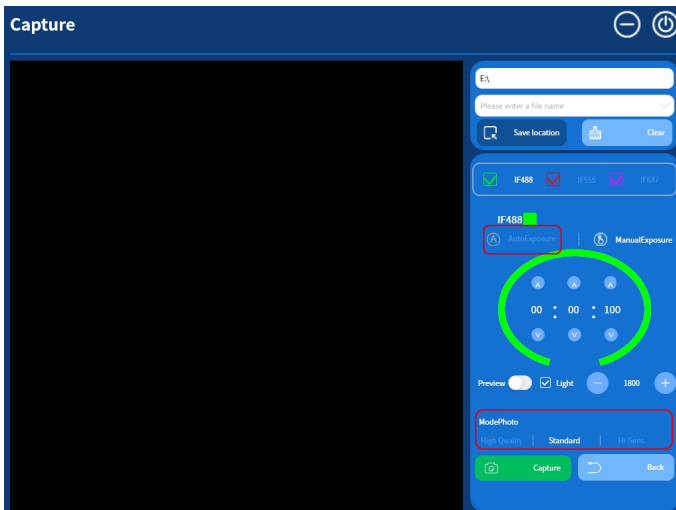


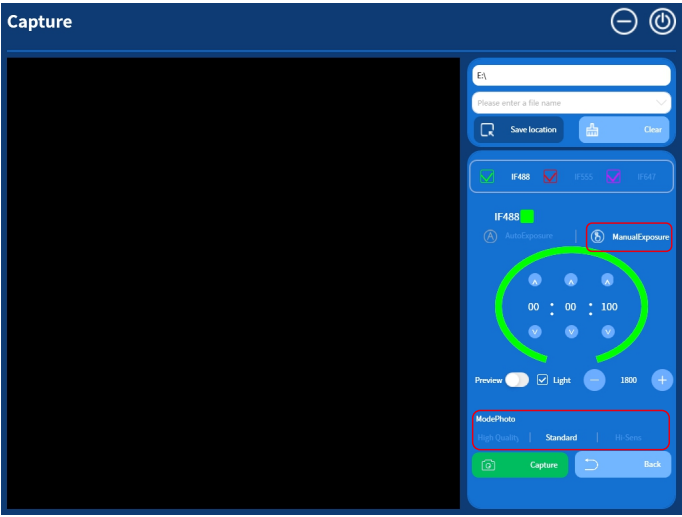
a. Check Auto Mode

Automatically calculates imaging parameters; no additional settings required. Shooting conditions: Auto exposure — Adaptive.

b. Manual Mode (Auto Mode unchecked)

You can set the shooting conditions for each fluorescence channel. First select the fluorescence channel to be set, then choose Auto Exposure — High Quality/Standard/High Sensitivity/Adaptive, or Manual Exposure — High Quality/Standard/High Sensitivity. (In Manual Mode, the default is Auto Exposure - Standard)

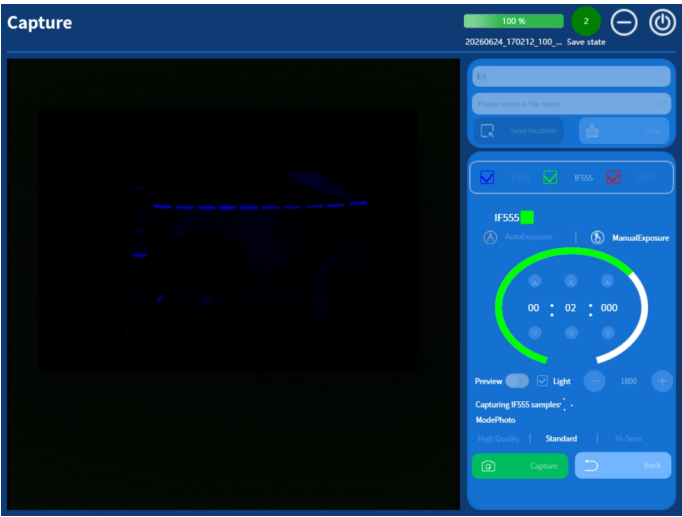




Manual Exposure

(8) Real-time imaging

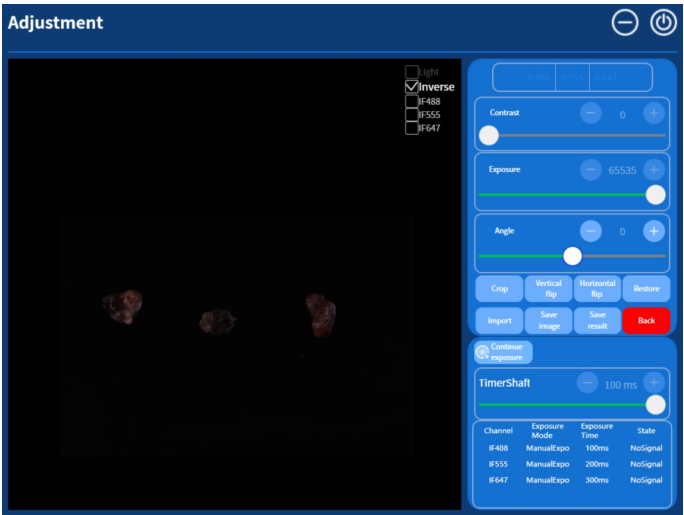
Once exposure starts, the left side displays the fluorescent tissue, and the right side shows the countdown of the exposure time. As the countdown proceeds, after each fluorescence channel is captured, the corresponding fluorescent tissue is immediately displayed on the left.



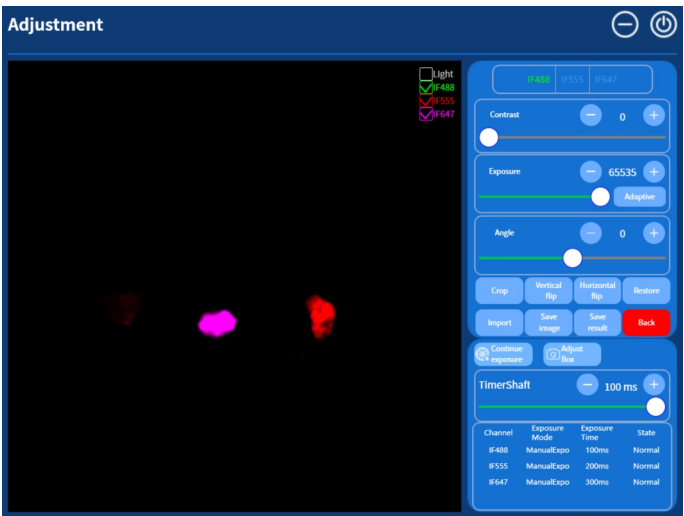
Real-time Imaging Interface

(9) Results page

After exposure is complete, the interface automatically jumps to the results page, where the results can be processed and saved.



Brightfield Image

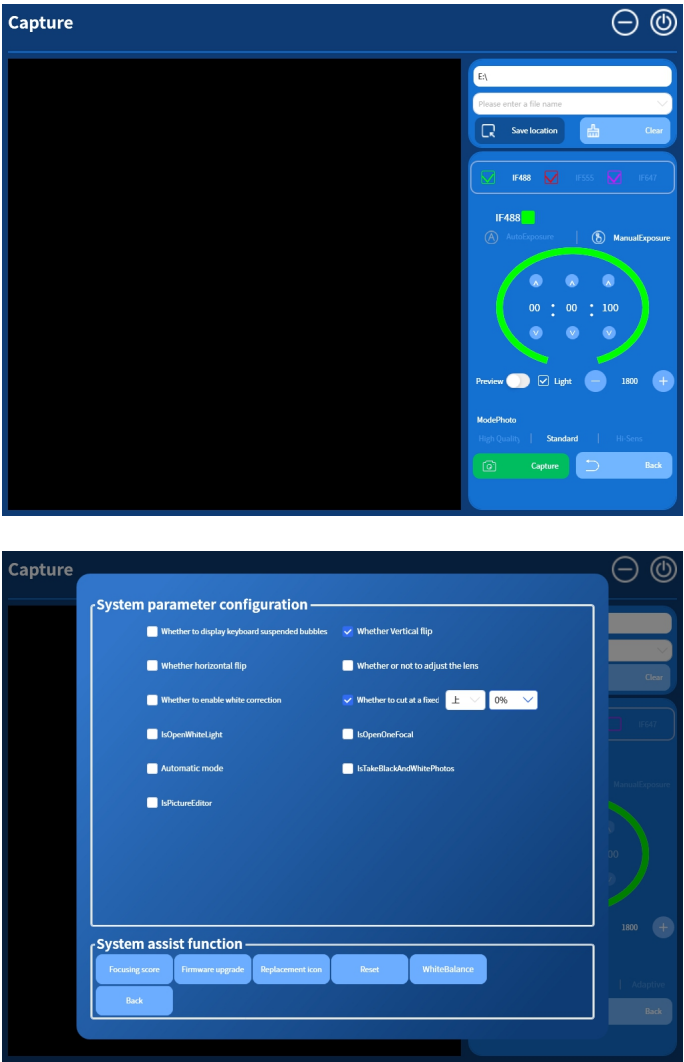


Fluorescence Image

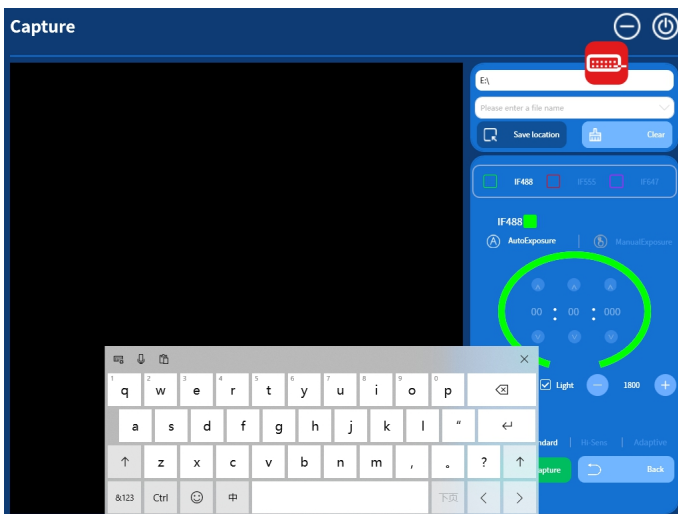
6.4.2 Function Modules

1. Parameter Configuration Function

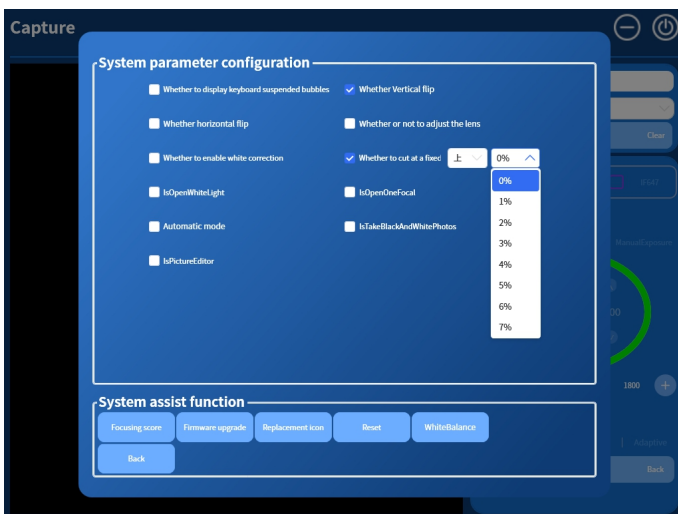
Click the blank area at the top to open the system parameter configuration window.



(1) Show keyboard floating bubble: Displays a floating box G; double-click to open the system keyboard;

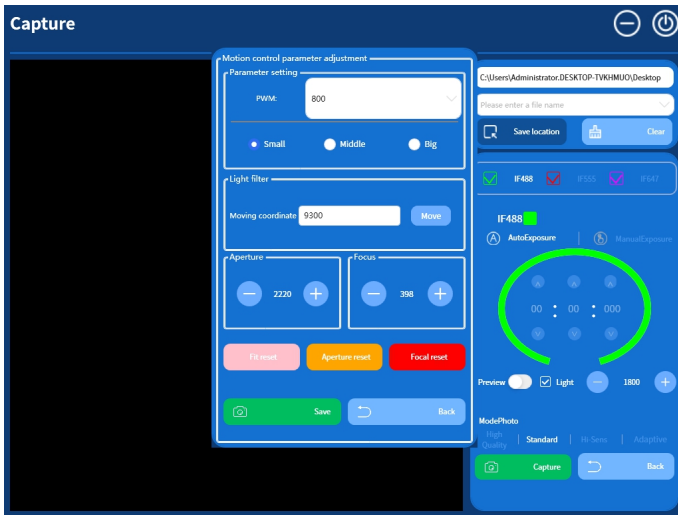


- (2) Enable white light: When checked, the white light automatically turns on when the door is opened; if unchecked, the white light does not turn on when the door is opened;
- (3) Auto mode: When checked, auto mode is enabled and shooting parameters are automatically calculated; no additional settings are required. Shooting conditions: Auto exposure – Adaptive. When unchecked, manual mode is enabled, allowing you to set shooting conditions for each fluorescence channel;
- (4) Enable fixed crop ratio: When checked, you can select a crop ratio; when unchecked, no cropping is applied (full field of view);



The following parameters have been calibrated before delivery and are not recommended to be modified.

- (5) Enable vertical flip: When checked, the image is flipped vertically. If the displayed image is vertically inverted compared to the actual object placement, check/uncheck this option to correct it;
- (6) Enable horizontal flip: When checked, the image is flipped horizontally. If the displayed image is horizontally inverted compared to the actual object placement, check/uncheck this option to correct it;
- (7) Enable lens adjustment: When checked, a lens parameter setting window pops up, allowing you to adjust the lens.

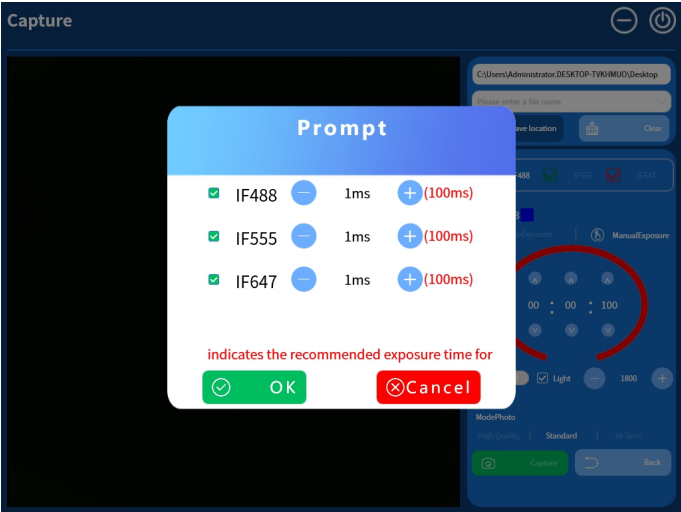


2. Results Page Functions

- (1) Temporal imaging: Drag the timeline to perform precise (retrospective) adjustment; you can select any frame within the exposure time as the final output result;
- (2) Time accumulation: Even after exposure ends, you can continue exposing individual fluorescence channels to obtain additional exposure on top of the existing exposure time. First check the channel(s) that need continued exposure, then set the additional exposure time. A minimum exposure time is shown next to each channel; the set time must be longer than this minimum. If a shorter time is entered, the actual exposure time will be the indicated minimum exposure time.



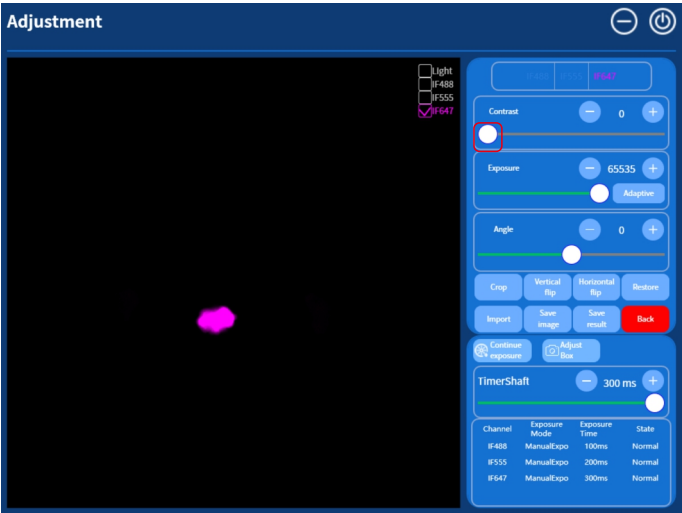
Temporal Imaging



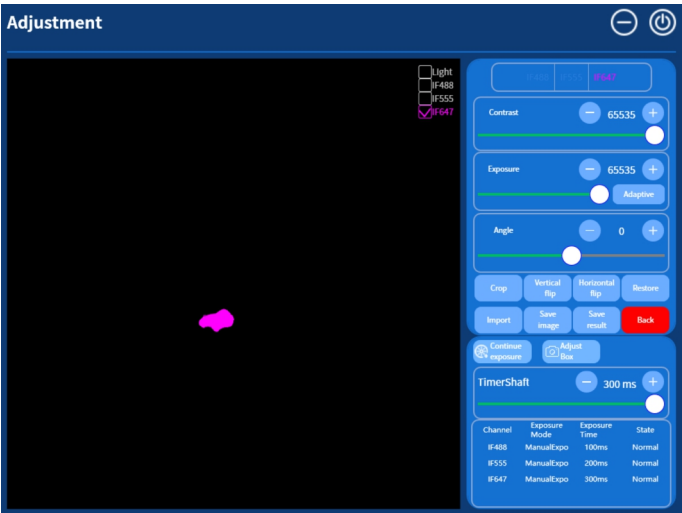
Time Accumulation

After obtaining satisfactory images through continued exposure and time imaging, you can adjust the images on the results page. (When adjusting, first select the corresponding fluorescence channel.)

(3) Contrast: Slide the contrast knob to adjust the contrast of the fluorescence image.



Minimum Contrast

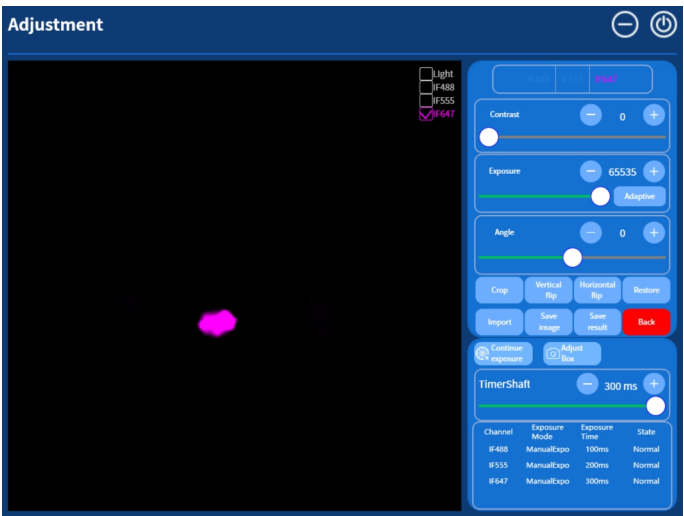


Maximum Contrast

(4) Exposure: Slide the exposure knob to adjust the brightness of the fluorescent tissue. Selecting "Adaptive" automatically adjusts to a suitable exposure brightness.



Minimum Exposure

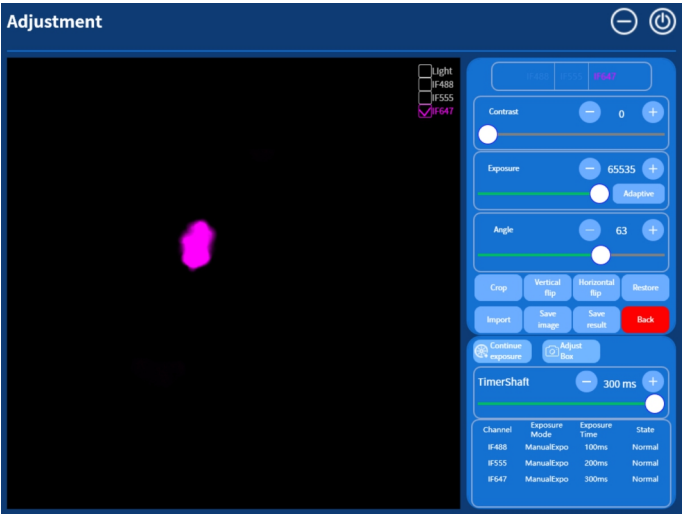


Maximum Exposure

(5) Angle: Slide the angle knob to rotate the image;



Original Image

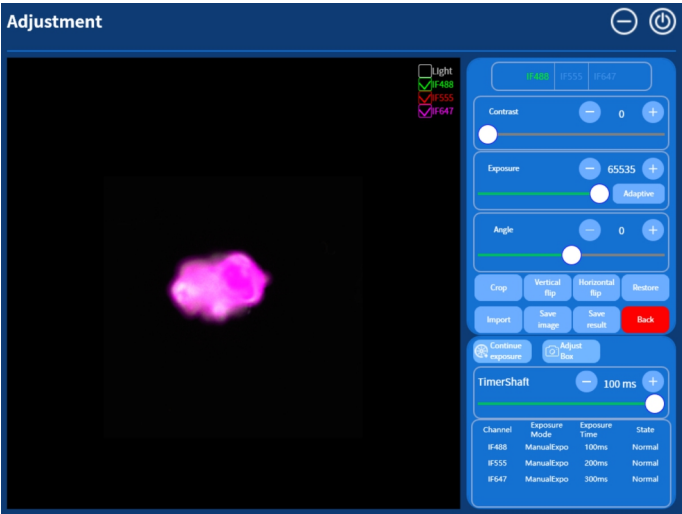


After Angle Adjustment

(6) Crop: Manually draw a region of interest to crop the selected area;



Original Image



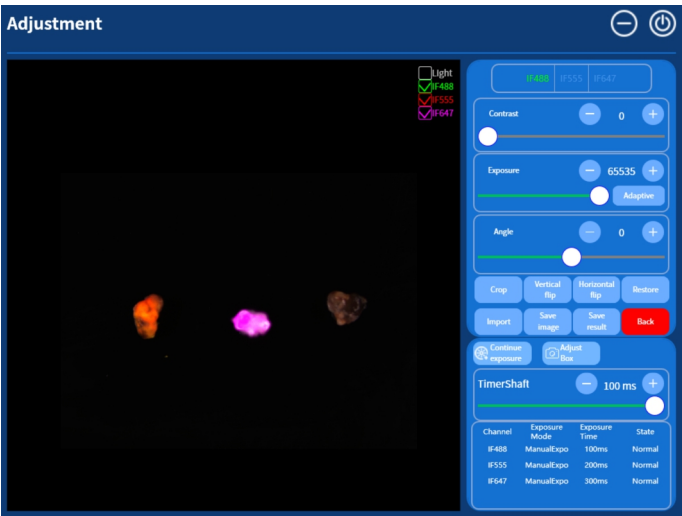
After Cropping

(7) Vertical flip: Click to flip the image vertically;

(8) Horizontal flip: Click to flip the image horizontally;

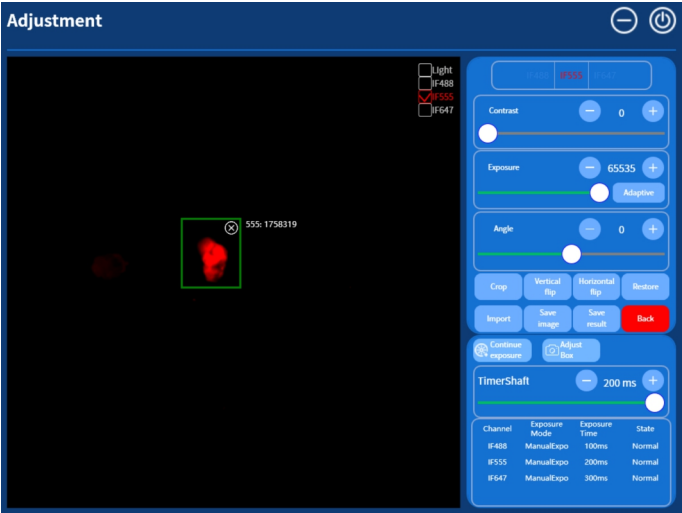


Vertical Flip



Horizontal Flip

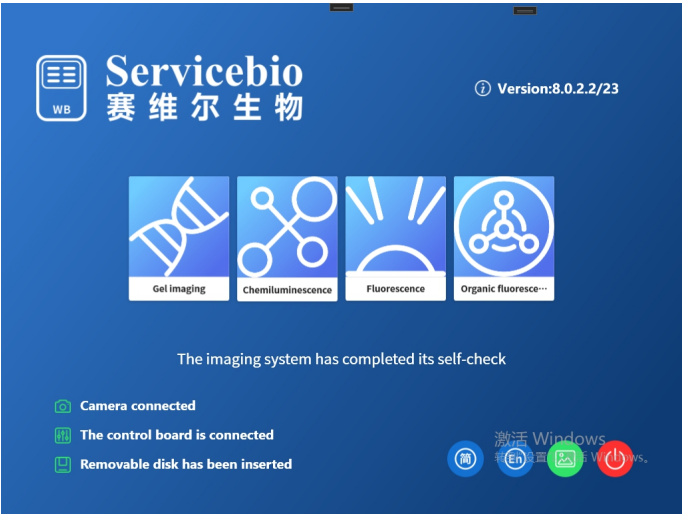
- (9) Reset: Restore the image to its original state;
 - (10) Import: Select a file automatically saved by the program to import it for further operations;
 - (11) Save images: Save the images, including the bright-field image, fluorescence image, and composite image;
 - (12) Save results: Save the adjusted images as an encrypted file;
- If you do not click "Save results" and instead click "Back", the system will prompt you whether to "Save results". If the result meets your requirements, select "Yes" to save the result. If you want to re-expose to obtain a better result, select "No".
- (13) Selection Box Adjustment: Click the "Selection Box Adjustment" button to create a selection box. Click the box to resize it, move it to box the whole membrane, then double-click to confirm and adjust contrast, exposure parameters, or split the file.



Selection Box Adjustment

6.5 Main Page and Export Interface

6.5.1 Main Page



Main Page

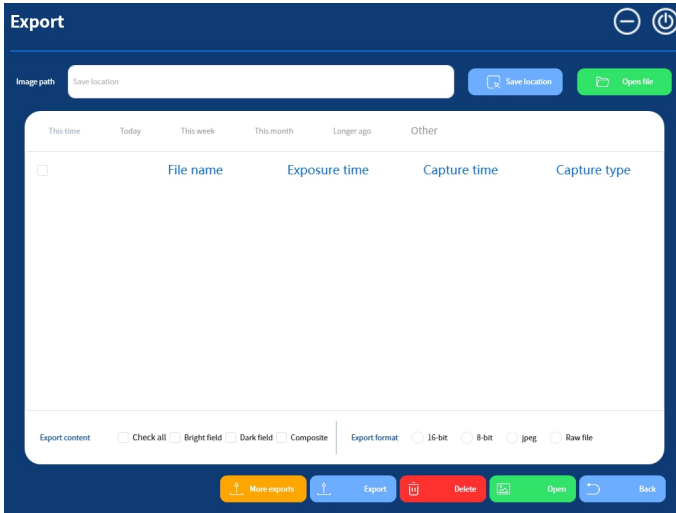
- 1.The upper left part displays the company logo;
 - 2.The lower left part is the status bar, showing the connection status of the current camera and control board,as well as the detection of inserted removable disks;
 - 3.The upper right part displays the software version number;
 - 4.The lower right part includes buttons for switching between simplified and traditional Chinese, switching to English,accessing the export page, and closing the program;
 - 5.The middle shows different imaging modules. Select the corresponding module according to the sample you need to capture;
- Abnormal situation: If during self-check the software shows "camera not connected" / "control board disconnected", please power off, disconnect power, and then restart power. (If still showing disconnected, contact the manufacturer.)



6.5.2 Export Page

On the main page, click the Export button to enter the Export page.





Export Page

- (1) Storage location Select the location of the image files automatically saved by the system, and the contents of the files will be displayed in a list format in the system;
- (2) Open file Open the selected directory;
- (3) Export Select the export content and format to export the images;
- (4) Delete Select the image file to be deleted, and it will be deleted;
- (5) Open Select the corresponding file in the list to open and jump to the result page. You can operate on the image on the result page, or double-click the corresponding file to open it;
- (6) Back Click "Back" to return to the main page.

07 Equipment Maintenance

7.1 Routine Maintenance (After Each Use / Daily)

1. Before cleaning, maintaining, or moving the instrument, disconnect power and wait for the device to cool completely;
2. After experiments, wipe the sample tray clean with a lint-free cloth. Remove residual liquids, gel pieces, reagent stains. Keep the interior dry and clean to prevent corrosion or mold;
3. When not using the instrument, power it off in a timely manner;

7.2 Weekly Maintenance

1. Check the power cord and USB ports for looseness or dust accumulation. Ensure ventilation openings are clear;
2. Clean the instrument housing, touch screen / keyboard to remove fingerprints and stains;
3. Check the door sealing gasket for cleanliness, deformation, or adhesive residue – ensure the dark chamber is light-tight.

7.3 Monthly Maintenance

1. Check that fans are operating normally without abnormal noise;
2. Check that the door latch and self-locking mechanism operate smoothly and reliably;
3. Run antivirus on the computer, clean up disks, back up experimental image data.

Internal component calibration, repair, or replacement shall only be performed by manufacturer-authorized personnel. Users are prohibited from disassembling the device themselves.

08 Warranty & Service Information

If any damage occurs to the instrument or components during the warranty period, our company is responsible for free repair or replacement of the damaged parts.

The following damages are excluded :

Damages caused by improper use.

Repairs or modifications not performed by our company.

Replacements made using non-original or unauthorized parts.

If you need more services, please visit Servicebio official website (<https://www.servicebio.com/>) or Email to info@servicebio.com.

Please fill in the following warranty card information carefully and keep it properly when purchasing the product.

Product Name	
Cat.No.	
Date of Purchase	
Address	
Product Number	
Quality Feedback	

09 Common Troubleshooting & Solutions

This section describes possible common faults, cause analysis, and solutions for the SCG-W6000 Multifunctional Fluorescence Imaging System.

After completing relevant experiments, the sample tray and glass surfaces must be cleaned daily to avoid affecting experimental results. For other anomalies not mentioned, contact our after-sales technical personnel.

No.	Fault Phenomenon	Cause Analysis	Solution
1	After plugging in power cord, pressing power button does not turn on	Power switch faulty; power not connected	Check power cord and power strip; contact our technician to replace switch
2	Chemiluminescence software auto exposure always shows 29:59	Door not closed properly; camera cable loose	Close door tightly; power cycle the device; if problem persists, contact technician
3	Software capture results are obviously blurry	Software focus parameters need calibration	Contact technician for calibration
4	White LEDs on both sides of dark chamber do not light	LED hardware failure	Contact technician
5	Squeaking noise when opening/closing door	Metal friction on hinge	Apply lubricant to door hinge
6	Exposure results show other abnormal signals	Residual liquid from previous membrane/sample on tray	Clean the sample tray
7	Software main page never loads	Antivirus or firewall blocking software startup	Disable antivirus software; Contact our company if the issue persists
8	Weak nucleic acid gel band signal in gel	Nucleic acid dye not suitable for UV excitation source; Band signal itself is weak	Switch to manual exposure mode: increase exposure imaging capture and gain; If problem persists, contact us

No.	Fault Phenomenon	Cause Analysis	Solution
9	Software shows "control board not connected"	Circuit board has been powered too long with cache buildup	Power off device for ~30 seconds, then restart
10	Abnormal color in protein gel capture result	White balance parameters need calibration	Contact our technical personnel to calibrate the white balance

10 WB Solution List

类型 Classification	货号 Cat.No.	名称 Product Name	功能/特点 Function/Features
蛋白保存 Protein preservation	试剂 Reagent	G3080-25-1.2ML	组织蛋白稳定保存液 (WB 专用) Tissue stabilization solution (WB specialized)
		G3742-50T	细胞浆、细胞膜与细胞核蛋白分步提取试剂盒 Cytoplasmic, Membrane and Nuclear proteins Separation and Extraction Kit
		G2002-100ML	RIPA 裂解液 (强) RIPA Lysis Buffer (Strong)
		G2038-100ML	IP 裂解液 IP Lysis Buffer
	试剂 Reagent	G2006-250UL	50×Cocktail
		G2007-1ML	磷酸酶抑制剂 Phosphoprotease Inhibitor
		G2008-1ML	PMSF (100mM)
		G2075-1ML	5×SDS-PAGE 蛋白上样缓冲液 (无气味、还原型) 5×SDS-PAGE Protein Loading Buffer (Odorless, Reducing)
		G2192-10ML	WB 蛋白拖尾优化试剂 WB Anti-Smearing Reagent
样本制备 Sample preparation	耗材 Consumable	HT-200-M	研磨管 2.0mL (无酶) Grinding Tube, 2.0 mL (enzyme free)
		EP-150-M	离心管 1.5mL (无酶) Centrifuge tube 1.5mL (enzyme free)
		SMV-3500	涡旋混匀仪 (智能型, 旋钮款) Vortex Mixer (Smart, Knob)
	仪器 Instrument	SWE-FP PLUS	研磨仪 低温型 Tissue Homogenizer Low Temperature
		SMB-MC	金属浴 (加热制冷振荡型) Dry Bath (Heating Cooling Shaking Type)
		SLX-1024F	高速低温离心机 Low-temperature High-speed Centrifuge
		LP-80	制冰机 Laboratory Flake Ice Maker

类型 Classification	货号 Cat.No.	名称 Product Name	功能/特点 Function/Features
样本制备 Sample preparation	耗材 Consumable	QX1010 动物眼科镊 Animal Ophthalmic Forceps	用于解剖动物时分离皮肤筋膜、肌肉、血管、神经及夹持组织用 For separating skin fascia, muscle, blood vessels, nerves and holding tissues during animal dissection.
		BH-0240 低温金属冰盒 Metal Coolbox	铝合金材质, 可长时间保持实验样品或者反应液的低温状态 Aluminum alloy material that can maintain the low temperature of experimental samples or reaction solutions for an extended period.
		QX1030 动物眼科剪 Animal Ophthalmic Scissors	动物眼科剪又称眼科手术剪、眼用手术剪, 是剪切眼部软组织用的器械。 For separating skin fascia, muscle, blood vessels, nerves and holding tissues during animal dissection.
		CS-PP-2417 细胞刮刀 Cell Scraper	细胞收集、试剂称量、溶液混匀, 多效合一经济好用 Cell collection, reagent weighing, and solution mixing — all-in-one, cost-effective and practical.
蛋白定量 Protein quantification	试剂 Reagent	G2166-200T 即用型 BCA 蛋白定量试剂盒 BCA Protein Quantitative Detection Kit (Ready-to-use)	用于在蛋白定量时制作准确的标准曲线和校准对照, 即取即用, 无需稀释, 方便快捷 For preparing accurate standard curves and calibration controls in protein quantification; ready-to-use, no dilution needed, convenient and fast.
		G2167-750T 即用型 Bradford 蛋白定量试剂盒 Bradford Protein Quantitative Detection Kit (Ready-to-use)	用于在蛋白定量时制作准确的标准曲线和校准对照, 即取即用, 无需稀释, 方便快捷 For preparing accurate standard curves and calibration controls in protein quantification; ready-to-use, no dilution needed, convenient and fast.
		ESP-96-D 高吸附酶标板 (Elisa Plate) 8 联孔, 平底 High Adsorption Elisa Plate, 8-well strip, flat bottom	灵敏度高, 高蛋白吸附 High sensitivity and high protein adsorption.
		G2193-50T 一步法手动梯度 PAGE 彩色凝胶快速配制试剂盒 One-step Manual Gradient PAGE Color Gel Quick Preparation Reagent Kit	制胶无需再区分度, 大 / 中 / 小分子量蛋白都能有效分离; 包含配套电泳缓冲液 Gel preparation requires no concentration differentiation; effectively separates large, medium and small MW proteins. Includes matching electrophoresis buffer.
制胶、电泳 Gel preparation/ Electrophoresis	试剂 Reagent	G2185-50T 一步法免染 PAGE 彩色凝胶超快速配制试剂盒 (10%) One-step stain-free Fastcast Colorful Acrylamide Kit (10%)	无需液封、无需等待下层胶凝固, 可直接加上上层胶, 15min 制好胶蛋白条带可直接通过紫外曝光成像, 无需额外染色 No liquid overlay or waiting for lower gel solidification required, the upper layer can be added directly, enabling complete gel preparation within 15 minutes. Protein bands are immediately visualized via UV exposure imaging without additional staining.
		G2194-10ML TEMED 替代物 TEMED Substitute	可以替代 TEMED 制备 PAGE 胶, 挥发性低, 气味轻微, 无强神经毒性 For PAGE gel preparation instead of TEMED; low volatility, mild odor, non-strongly neurotoxic.
		G2087-250UL Prestained Protein Marker VII (8-195 kDa)	预染 (-8, -13, -20, -30, -40, -55, -70, -105, -140, -195 kDa)
		G2091-250UL Prestained Protein Marker X (10-180 kDa)	预染 (-10, -15, -25, -35, -40, -55, -70, -100, -130, -180 kDa)
		G2081-1L Tris-甘氨酸 SDS-PAGE SWE 高分辨快速电泳缓冲液 Tris-Glycine SDS-PAGE SWE Rapid High Resolution Running Buffer	适用于 Tris-甘氨酸电泳体系, 对小分子蛋白分离效果更好, 条带压缩更细, 兼容高压电泳, 30min 可完成电泳 Suitable for Tris-Glycine electrophoresis system, more effective for the separation of small molecules, finer compression of bands, compatible with High voltage electrophoresis, take about 30 min to complete the electrophoresis.
		G2189-100ML 电泳专用消泡剂 Defoamer for Electrophoresis	消除电泳槽内泡沫, 使样本孔更清晰。安全无毒, 不影响样品和后续 WB 结果 Removes tank foam for clearer sample wells; safe, non-toxic, no impact on samples and subsequent WB results.
	耗材 Consumable	TR-001 多彩电泳玻璃板沥水架 Colorful Electrophoresis Glass Plate Rack	斜放晾干更快, 底部不留水印 Dry faster when placed at an angle, no watermark at the bottom.
		TP-10WB-C WB 点样盒装吸头 WB Gel-loading Tips	加长设计, 搭配赛维 50μL 移液器, 10-50μL 样本一次移液, 残留少, 误差小, WB 实验更准确 Extended design, with Servicebio 50μL pipette, 10-50μL samples can be pipetted at one time with minimal residue and error, ensuring accurate WB experiments.

类型 Classification	货号 Cat.No.	名称 Product Name	功能/特点 Function/Features
制胶、电泳 Gel preparation/ Electrophoresis	耗材 Consumable	BVE-4-ZJ 通用分体式制胶器 Gel Casting Stand	1、分体式制胶，制胶和电泳互不干扰； 2、一次可同时制备 2 块胶，正反面设计，体积小，节约实验台空间。 3、可适配赛维尔、伯乐等不同品牌各种规格玻璃板； 1. Split-type gel casting, with no interference between gel casting and electrophoresis; 2. Able to cast 2 gels at the same time, double-sided design, compact size to save lab bench space; 3. Compatible with various glass plates from different brands including Servicebio and Bio-Rad.
	SMS-200	磁力搅拌器 (智能型) Magnetic Stirrer (Smart)	自动、手动两种模式，磁子寻踪，智能配速，10L 搅拌体积 Both automatic and manual modes, magnetic bead tracking, intelligent speed, 10L stirring volume.
	SMC-5000F	掌上离心机 Mini Centrifuge	复合一体转子，0.1/0.2/0.5/1.5/2 mL 离心管、0.1/0.2 mL 8 联管可同时离心；开盖急停与缓停两种模式可选 One-piece composite rotor, 0.1/0.2/0.5/1.5/2 mL centrifuge tubes and 0.1/0.2 mL 8 tubes can be centrifuged at the same time; Two stop modes to choose from: opening the cover for emergency stop and slow stop.
	SPW-DM	双模电源 Dual-mode power supply	双模组，可同时输出恒压、恒流模式 (最大电压 600V，最大电流 600mA) Dual-mode power supply, both constant voltage and constant current modes can output simultaneously the largest voltage is 600V and the current upper limit is 600mA.
	SPW-M500	电泳电源 Electrophoresis Power Supply	可实现 5-15min 超快速湿转，湿转结果均一效果好，最大电流可达 1750mA；可同时电泳和转膜。 It achieves ultra-fast wet transfer in 5-15 minutes with uniform results and a maximum current of 1750mA, and its two independent outputs allow for simultaneous electrophoresis and transfer.
	BVE-4	垂直电泳仪 Vertical electrophoresis system	分体式制胶；最多同时 4 块胶电泳；夹板式卡扣设计；多重防反设计；槽面标注液位线 Split-type gel preparation; supports up to 4 gels for electrophoresis simultaneously; clamp-type buckle design; multiple anti-reverse designs; marked liquid level lines on the tank surface.
	T-20 PLUS	制胶仪 Gel Casting System	1、可以配制 4%-20% 各种浓度的梯度胶、等度胶； 2、设置简单，试剂实时混匀，避免提前凝固，可以持续制胶； 3、配套试剂盒可连续制胶约 260 块，每块胶 <1 块钱 1. Capable of preparing gradient gels and uniform gels of various concentrations from 4% to 20%; 2. Simple setup, real-time reagent mixing to avoid premature solidification and enable continuous gel casting; 3. The supporting kit allows continuous casting of approx. 260 gels, at a cost of less than 1 yuan per gel.
蛋白转膜 Protein transfer	耗材 Consumable	BVE-V10 高通量制胶器 High-Throughput Gel Casting Stand	一次可制 10 块胶，专为高通量制胶设计 Capable of preparing 10 gels at a time, specially designed for high-throughput gel preparation.
	试剂 Reagent	G2028-1L 免冰浴快速转膜缓冲液 Ice-Bath Free Fast Transfer Buffer (Powder)	适用于蛋白转印实验，产热微小，30min 内不需要冰浴，可以在 400mA 的电流下快速转膜，适用于湿法转膜 Suitable for Protein transfer experiments; Low heat production, 30min without ice bath. Rapid transfer of proteins to blotting membranes at 400 mA. Suitable for the wet membrane transfer.
		G2150-1L 1×TBST 缓冲液 (即用型) 1×TBST buffer (ready-to-use)	可作为 WB 实验中的抗体、奶粉或 BSA 的稀释液或用于孵育后清洗 It can be used as a diluent for antibodies, milk powder or BSA in WB experiments, or used for washing after incubation.
	耗材 Consumable	G6047-50-0.45 PVDF 膜 (0.45μm) PVDF Transfer Membranes (0.45μm)	适用分子量大于 10 kDa 的蛋白，5.5 cm×8.5 cm，每包 10 张【自产 PVDF 膜】 For proteins with a molecular weight greater than 10 kDa, 5.5 cm×8.5 cm, 10 sheets per pack [Self-produced PVDF Transfer Membranes]
		G6046-0.2 PVDF 膜 (0.22 μm) PVDF Transfer Membranes (0.22 μm)	适用分子量小于 20 kDa 的蛋白，5.5 cm×8.5 cm，每包 10 张 For proteins with a molecular weight greater than 20 kDa, 5.5 cm x 8.5 cm, 10 sheets per pack.
		G6048-20A WB 转膜海绵 (免滤纸，70×90mm) WB Transfer Sponge (Filter Paper-Free, 70×90mm)	省去“三明治结构”中的滤纸，可重复使用 Omit the transfer filter paper in the traditional "sandwich structure". Reusable.
	仪器 Instrument	BVT-4 转印电泳仪 Transfusion electrophoresis apparatus	最多同时 4 块胶转膜；转印夹、转印芯 2 色区分；转印夹具有提手功能； Supports up to 4 membranes transfers simultaneously; the transfer clamp and transfer cores are distinguished by two colors; the transfer clamp features a handle for easy handling.

类型 Classification	货号 Cat.No.	名称 Product Name	功能/特点 Function/Features
蛋白转膜 Protein transfer	耗材 Consumable	SVT-NZ WB 专用镊子 Tweezers for WB	用于 WB 实验中移除转印膜 For removing transfer film in WB experiments
		SVT-GL WB 专用滚轮 WB-specific Roller	全塑料，不生锈；用于去除 WB 转印时三明治结构中的气泡 Made from plastic materials, non-rusting; For removing bubbles in the sandwich structure during WB transfer.
		WCD-74 WB 专用切胶铲 WB special glue cutting spatula	开刃处理，切胶更光滑；可作为拆卸预制胶的器具 Open edge treatment, cut the glue more smooth; can be used as a pry tool for removing preformed glue.
		WSLQP WB 专用切胶托盘 WB Gel Cutting Tray	全塑料，不生锈，用于凝胶浸渍、转印夹存放 All-plastic, non-rusting, for gel infiltration, transfer clip storage.
封闭孵育 Blocking incubation	试剂 Reagent	G2052-500ML 无蛋白快速封闭液 Protein Free Rapid Blocking Buffer	WB 实验 5min 快速封闭，效果好 Provides rapid and effective blocking in WB experiments within 5 minutes.
		G2195 快速封闭液 Rapid Blocking Buffer	WB 实验 5min 快速封闭，效果好，兼容直标抗体，通用性更强 5-min rapid blocking for Western Blot (WB) with excellent performance; compatible with directly labeled antibodies and highly versatile.
		G2025-100ML 一抗稀释液 Primary Antibody Diluent	可用于 WB、免疫组织化学染色实验中一抗的稀释 Used for the dilution of primary antibody in WB and immunohistochemical staining.
		G2009-100ML 二抗稀释液 Western Secondary Antibody Diluent Buffer	可用于 WB 实验中的二抗稀释 Used for the dilution of secondary antibody in WB assay.
		G2079-100ML 抗体洗脱液（膜再生液，增强型） Antibody Stripping Buffer (Membrane Regeneration Solution, Enhanced)	能够安全高效地从印迹膜（NC/PVDF）上去除一抗和二抗，方便再次检测 Safely and efficiently removes primary and secondary antibody
	耗材 Consumable	G9055-4 抗体孵育盒（4 格整膜） Antibody Incubation Box (4 Grids Full Membrane)	专为 WB 设计，可同时孵育四张整膜，节约抗体 / 防污染，搭配赛维尔多功能型摇床 DS-3D100 使用 Specially designed for WB, four Grids full membrane can be incubated simultaneously, saving antibody/preventing contamination, use with Xavier Bio Multi-functional Shaker DS-3D100.
		SYC-FZ100 钟摆摇床（分体式） Pendulum Shaker (Split-Type)	可放置在冰箱、层析柜中，低温孵育、低温配液，实验效果好 Can be placed in refrigerators and chromatography cabinets for low-temperature incubation and solution preparation, ensuring excellent experimental performance.
	试剂 Reagent	G2161-200ML ECL 发光液组合装 ECL Chemiluminescent Substrate Reagent Combo Pack	满足高中低不同浓度样本的曝光需求 Meet high, medium, and low protein concentration requirements
		SCG-W3000PLUS 化学发光成像仪 Chemiluminescence Imaging System	彩色 Marker 直观真实，一眼判定条带大小 弱信号、多张膜、同张膜信号强弱不同，都能一次完成曝光 Color Markers – Visually intuitive and true-to-life, enabling instant band size determination. Weak signals, multiple membranes, or varying signal intensities on the same membrane – All can be captured in a single exposure.
		SCG-W5000PLUS 多功能成像系统 Multi-functional imaging system	兼具化学发光系统和凝胶成像系统，可进行 WB 印迹膜检测、蛋白胶成像、核酸胶成像 / 切胶等实验，成像有彩色和黑白两种模式可选。 Combines both chemiluminescence and gel imaging systems, suitable for experiments including Western blot (WB) membrane detection, protein gel imaging, nucleic acid gel imaging and gel cutting; both color and black-and-white imaging modes are available.
		SCG-W6000 多功能成像系统 Multi-Functional Imaging System	兼具荧光成像系统、化学发光系统和凝胶成像系统，可进行 WB 印迹膜检测（含荧光成像与化学发光成像）、蛋白胶成像、核酸胶成像 / 切胶等实验，成像有彩色和黑白两种模式可选（默认荧光波段 488/555/647nm，其他波段可选） Integrates fluorescence imaging, chemiluminescence imaging and gel imaging systems. It supports Western Blot (WB) membrane detection (including fluorescence and chemiluminescence imaging), protein gel imaging, nucleic acid gel imaging, gel cutting and other experiments. Both color and monochrome imaging modes are available (default fluorescence wavelengths: 488/555/647 nm; other wavelengths are optional).
染胶、染膜 Gel staining/ Film staining	试剂 Reagent	G2059-250ML 考马斯亮蓝超快染色液 Coomassie Brilliant Blue Ultrafast Staining	不含有毒甲醇和刺激性乙酸，染色 30min 可检测低至 50ng 蛋白 Does not contain toxic methanol and irritant acetic acid. Staining for 30 minutes enables detection of proteins as low as 50ng.

类型 Classification	货号 Cat.No.	名称 Product Name	功能/特点 Function/Features
染胶、染膜 Gel staining/ Film staining	试剂 Reagent	G2011-100ML 丽春红染色液 Ponceau S Staining	可用于 PVDF 膜、NC 膜和醋酸纤维素膜上的蛋白的快速染色检测 Used for the rapid detection of proteins on PVDF, nitrocellulose (NC) and cellulose acetate membranes.
		G2080-25T 蛋白银染试剂盒 Protein Silver Stain Kit	染色检测低丰度蛋白，灵敏度比传统的考马斯亮蓝染色法高 100 倍，操作方便快捷 Detects the low abundance proteins; The sensitivity of silver stain is 100 times higher than the traditional Coomassie brilliant blue stain; Convenient and rapid operation.
蛋白纯化 Protein purification	试剂 Reagent	G2209-50T 蛋白免疫沉淀试剂盒 (Protein A 磁珠法) Immunoprecipitation Kit (Protein A Magnetic Beads)	使用高质量的重组 Protein A 磁珠，进行高得率 IP 或者 Co-IP 的试剂盒。可使用手动或自动磁性分离 Kit for high-yield immunoprecipitation (IP) and co-immunoprecipitation (Co-IP) utilizing high-quality recombinant Protein A magnetic beads. Supports both manual and automated magnetic separation.
		G2246-10T 抗体纯化试剂盒 (Protein A 琼脂糖凝胶法) Antibody Purification Kit (Protein A Sepharose Gel Method)	用于分离和纯化单克隆抗体、多克隆抗体或 Fc-融合蛋白的通用性亲和层析介质 A universal affinity chromatography medium for the isolation and purification of monoclonal antibodies, polyclonal antibodies or Fc-fusion proteins.
		G2245-10ML His 标签蛋白纯化试剂盒 (可溶蛋白) His-Tagged Protein Purification Kit (For Soluble Proteins)	可直接用于可溶性 His 标签融合蛋白的纯化，使用方便，快捷 Ready-to-use for the purification of soluble His-tagged fusion proteins, convenient and efficient.
	填料 Resin	G2206-1ML SweAgarose Protein A 抗体纯化琼脂糖凝胶 SweAgarose Protein A Antibody Purified agarose	经重组改造的 Protein A 与凝胶以一定的方式结合，可用于免疫沉淀或抗体的纯化。 Recombinantly modified Protein A is coupled to the gel matrix in a specific manner, and can be used for immunoprecipitation (IP) or antibody purification.
		G3657-1ML SweMagrose Protein G 抗体纯化磁珠 SweMagrose Protein G Antibody Purified Magnetic Beads	经重组改造的 Protein G 与磁珠以一定的方式结合，可用于免疫沉淀或抗体的纯化。可使用手动或自动磁性分离工具 Recombinantly modified Protein G is coupled to magnetic beads in a specific manner, and can be used for immunoprecipitation (IP) or antibody purification. It is compatible with manual or automated magnetic separation tools.
		G3651-1ML 琼脂糖羟基磁珠 (SweMagrose OH) (另有羧基、氨基、硅羟基磁珠) SweMagrose OH	琼脂糖磁珠是将天然亲水性高分子琼脂糖和超顺磁性材料复合形成的一种功能性磁性微球，表面具有丰富的糖羟基，用于生物配体 (蛋白、多肽等) 的嫁接 (Carboxyl-, amino- and silanol-functionalized magnetic beads are also available) Agarose magnetic beads are functional magnetic microspheres prepared by compositing natural hydrophilic polymer agarose with superparamagnetic materials. They feature abundant sugar hydroxyl groups on the surface, which are used for the conjugation/immobilization of biological ligands (proteins, peptides, etc.).
	试剂 Reagent	G3409-5000U 重组 TEV 蛋白酶 (His-tag) Recombinant TEV Protease (His-tag)	常用于去除融合蛋白中 MBP、GST、His 或其他标签蛋白；其本身带有 His 标签可以与镍柱结合 Commonly used to remove MBP, GST, His or other tag proteins from fusion proteins; it carries a His-tag itself and can bind to nickel columns.
		G3431-200UL HRP 标记链霉亲和素 Streptavidin (HRP Conjugated)	主要用于基于生物素 (Biotin) 标记分子 (如核酸、蛋白、抗体等) 的检测 Mainly used for the detection of biotin-labeled molecules (e.g., nucleic acids, proteins, antibodies, etc.).
服务 Service	WB (普通蛋白、磷酸化蛋白、外泌体蛋白、核 / 线粒体 / 膜蛋白)、蛋白银染、蛋白组学、蛋白核酸互作 (IP、Co-IP、GST-pulldown、ChIP、EMSA)、蛋白表达		
	WB (general proteins, phosphorylated proteins, exosomal proteins, nuclear/mitochondrial/membrane proteins), protein silver staining, proteomics, protein-nucleic acid interaction (IP, Co-IP, GST-pulldown, ChIP, EMSA), protein expression		



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