

1. Remove the protective foam, ensuring no obstructions.
  - Scan the QR code for instructional video, if needed.



2. Switch on Qsep<sub>1</sub>-Plus, the LED will light up in multiple colors. Wait a few seconds until the instrument and Wi-Fi are initialized, and the green LED will start flashing.



Blue → Sample Tray Detected  
 Green → Wi-Fi Connectable  
 Red → HV On

- DO NOT turn the instrument back on immediately after powering off. Wait at least 5 seconds.

### A. Ethernet Cable Connection: Proceed to step 3.



### B. Wi-Fi Connection: Follow these steps to connect with the Qsep<sub>1</sub>-Plus instrument.

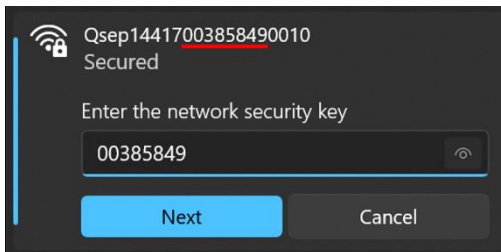


- I. Check if the Wi-Fi network's AP source is available on the computer.



- II. Find the SSID, a combination of Qsep1 and the instrument's serial number (16 digits).

- III. Enter the password, the middle 8 digits of the instrument's serial number, to connect. The password is also available on the information sticker on the back of the instrument.



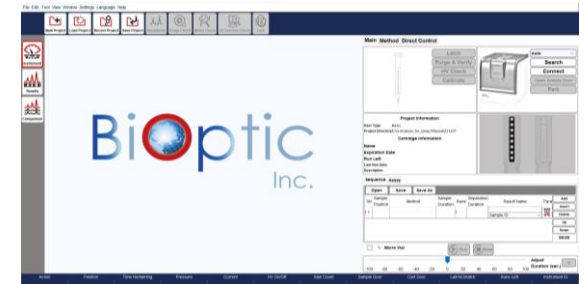
- IV. Once connected, the description will indicate "No internet, secured".

3. Double-click on the Q-Analyzer Icon.



- If the computer cannot find the Qsep<sub>1</sub>-Plus SSID, ensure the distance between Qsep<sub>1</sub>-Plus and the computer is within 10 meters and start from step 2B again.
- If the computer cannot connect with the Qsep<sub>1</sub>-Plus,
  - a. Check the Wi-Fi IP assignment is set to "Automatic (DHCP)".
  - b. Initiate the software as administrator.
  - c. Allow Q-Analyzer pass through firewall or turn off the firewall.

4. Q-Analyzer software user interface will appear:

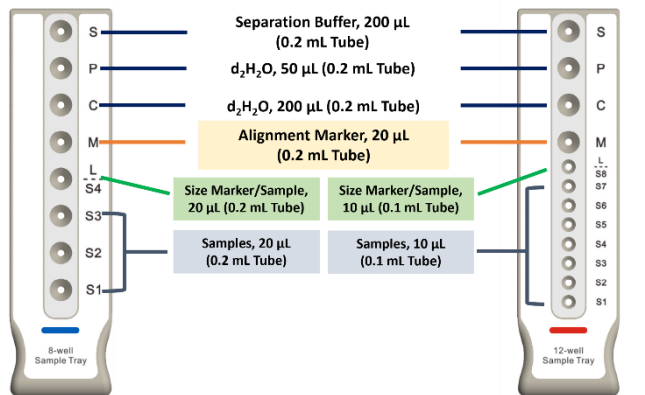


5. Click "Search", and the instrument's serial number will display. Confirm it belongs to the connected instrument.
6. Click "Connect", and the Qsep<sub>1</sub>-Plus image will change color to indicate connection, while the green LED will flash for a longer duration.

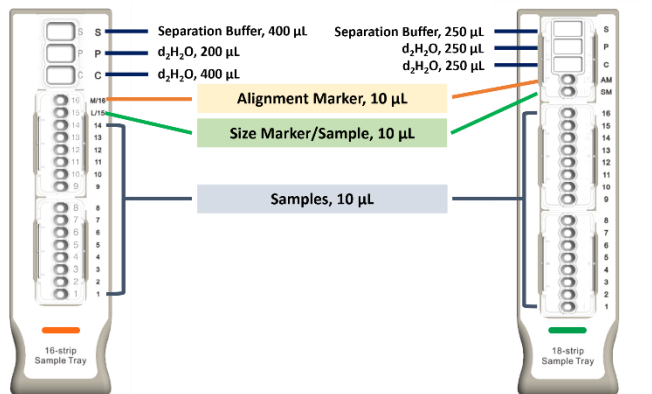


7. Prepare buffers and Alignment Marker, allocating them to the corresponding positions on the sample tray.

### 8-well Sample Tray



### 16-strip Sample Tray



Refer to the table below to identify the tubes compatible with each sample tray:

	Name	Cat. No.	Volume	Image
8-well Sample Tray	Micro Vial	C104250	≥ 2 µL	
	0.1 mL PCR Tube	-	≥ 10 µL	
	0.2 mL PCR Tube	-	≥ 20 µL	
12-well Sample Tray	0.1 mL Strip Tube	C104252	≥ 10 µL	
16-strip Sample Tray	16-strip Sample Tube	C104254	≥ 10 µL	
18-strip Sample Tray	18-strip Sample Tube	C104257	≥ 10 µL	

- Make sure there are no air bubble in the tubes.
- Hold the tray and press all the tubes tightly down into the wells. Bend the lids of the tubes to the side to avoid damaging the cartridge tip.
  - Click "Open Sample Door", and the sample door will open automatically.
  - Slide the sample tray into the instrument, ensuring it is pushed to the end until the color bar aligns with the edge of the holder.



- Click "Park", and the sample tray holder will move into instrument.



- Unpack the cartridge by following the steps outlined in "Unpacking Guide" in the cartridge kit before its initial use.

- Open the cartridge door by pressing the white button and insert the cartridge with the guiding groove facing the front.

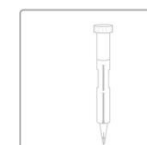


Guiding groove



- Close the cartridge door and click "Latch". The cartridge information will display on the screen after latching.

### Unlatched



- Latch
- Purge & Verify
- HV Check
- Calibrate

### Latched



- Unlatch
- Purge & Verify
- HV Check
- Calibrate

Project Information		Project Information	
User Type	Basic	User Type	Basic
Project Directory	O:\IO-Analyzer_for_Qsep1\Result\231212	Project Directory	O:\IO-Analyzer_for_Qsep1\Result\231212
Cartridge Information		Cartridge Information	
Name	S1-O-231212-2	Name	S1-O-231212-2
Expiration Date	2024-Jun-09	Expiration Date	2024-Jun-09
Run Left	200	Run Left	200
Last Run Date	2023-Nov-12	Last Run Date	2023-Nov-12
Description	High Resolution	Description	High Resolution

**⚠ Please wait a few second before you open the cartridge door.**

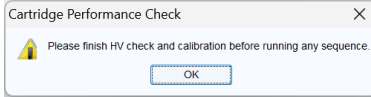
### Components of Cartridge Kit (Cat. C105200)

- Cartridges
- Alignment Markers
- Separation Buffer
- Dilution Buffer
- Mineral Oil
- Buffer Tray
- Droppers
- 0.2 ml tubes



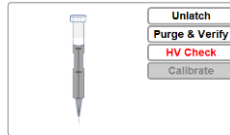
### 15. Cartridge Calibration:

Calibration is necessary before its initial use to ensure the quality of a new cartridge after shipment. Follow the steps below:



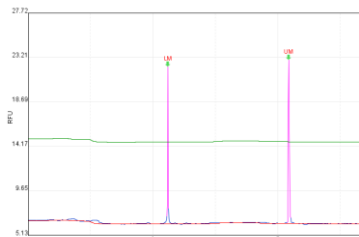
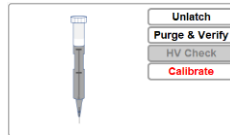
#### A. Click "HV Check".

- Check if the current is stable after HV Check. Repeat 2-3 times if the current remains unstable.



#### B. Click "Calibrate".

- Ensure the Alignment Marker is placed correctly. DO NOT use Size Marker or DNA sample for calibration.



For troubleshooting, please refer to cartridge unpacking guide for more detailed instructions.

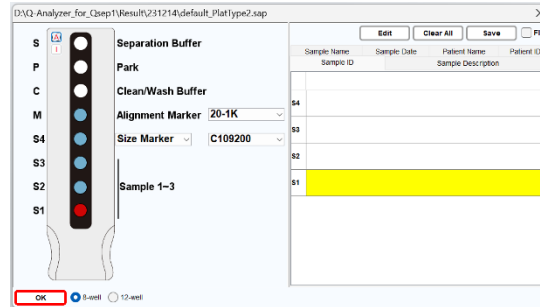
16. Designate ① the sample positions, ② test method, sample duration, runs, ③ result name and ④ parameters. Click on the blank column and follow these steps:

Open	Save	Save As					Add
SN	Sample Position	Method	Sample Duration	Runs	Separation Duration	Result Name	Para
1	S1	M-4-10-06-300	10	1	300	Test Sample ID	▼

①      ②      ③      ④

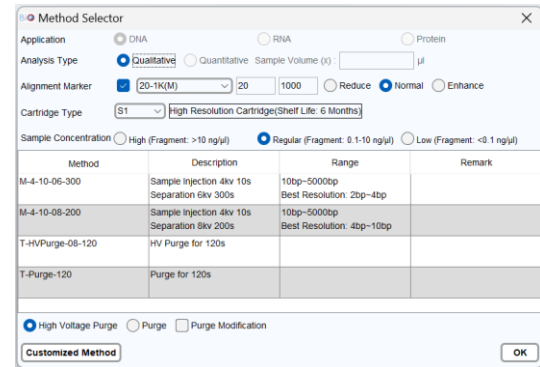
Micro Vial      Run      Stop

① Click "Sample Position" to mark the sample positions on the sample tray, and then select the appropriate markers before pressing "OK".



• Choose the appropriate Size Marker if creating a size marker run for calculation, and place the tube on the corresponding position.

② Click "Method" to select the analysis method.

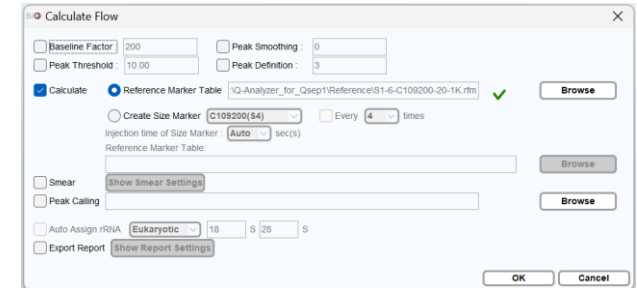


③ Enter the result name.

Open	Save	Save As					Add
SN	Sample Position	Method	Sample Duration	Runs	Separation Duration	Result Name	Para
1	S1	M-4-10-06-300	10	1	300	Test Sample ID	▼

Micro Vial      Run      Stop

④ Click the "Para" icon to set parameters (Baseline Factor, Peak Threshold, Calculate, etc.).

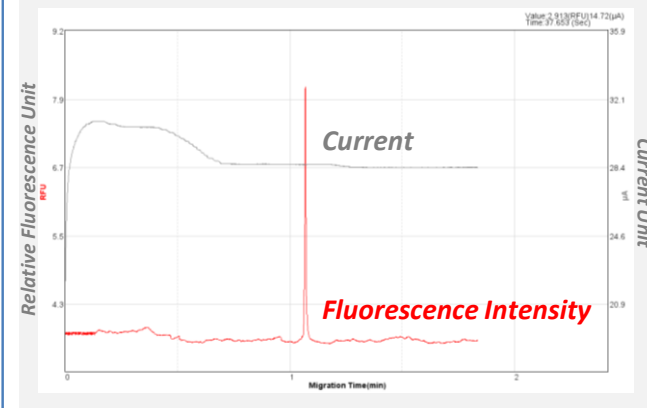


17. Click "Run" to start the analysis.

Open	Save	Save As					Add
SN	Sample Position	Method	Sample Duration	Runs	Separation Duration	Result Name	Para
1	S1	M-4-10-06-300	10	1	300	Test Sample ID	▼

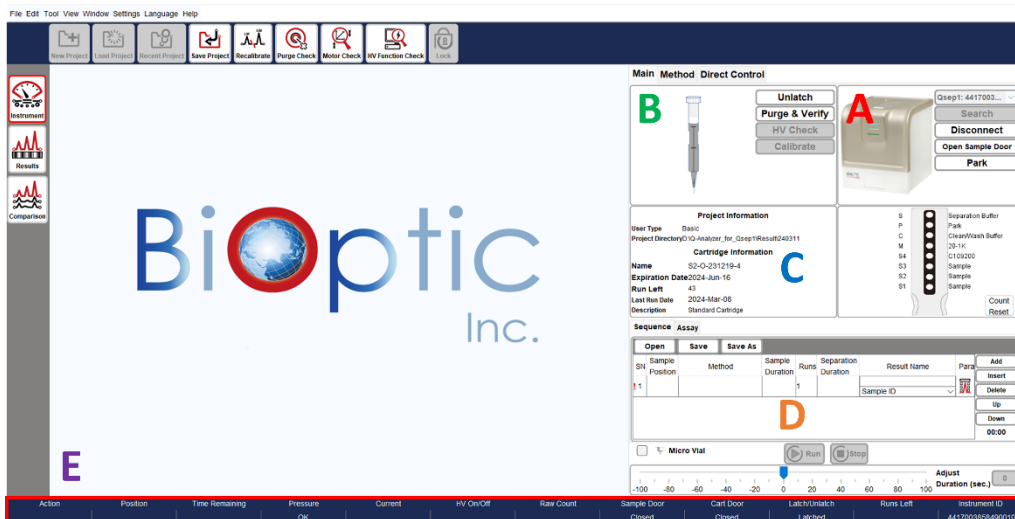
Micro Vial      Run      Stop

### Brief introduction of the Signal Chart:

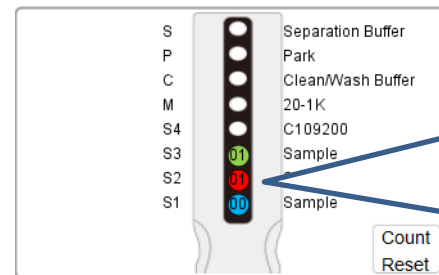





Please refer to the Qsep<sub>1</sub>Bio-Fragment Analyzer User Manual for detailed information.

## Introduction of the Control Panel



- A:** Instrument Control
- B:** Cartridge Control
- C:** Project and Cartridge Information
- D:** Sequence Setup
- E:** Status Bar



-  **Pending**  
Number: Remaining runs
-  **Proceeding**  
Number: Remaining runs
-  **Finished**

**Count Reset:** If the buffers are changed before it reaches the recommended 20 runs, click "Count Reset" to start over.

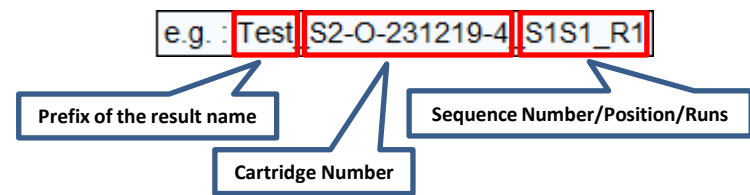
Sequence Assay

Open	Save	Save As						
SN	Sample Position	Method	Sample Duration	Runs	Separation Duration	Result Name	Para	Add
1	S1,S2,S3M-4	10-08-160	10	1	160	Test		Insert
						Sample ID		Delete
						None		Up
						Sample ID		Down
						Sample Name		00:12
						Time		
						Cartridge Number		
						User Definition		

Prefix of the result name: Tool tip will show up the previewing of the result name.

Micro Vial  Run  Stop

Adjust Duration (sec.) 0



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