Getting started with $Qsep_1$-Plus

Packing List

$Qair_{box}$ & Power Adapter

$Qsep_1$-Plus

C105200 (S1 & S2 Cartridge Kit)

$Qsep_1$-Plus Power Adapter

Markers

Mini Centrifuge

Ethernet Cable

Sample Trays
(8, 12 and 16+3 wells)

C105200 (S1 & S2 Cartridge Kit)

SD Card & Software Key
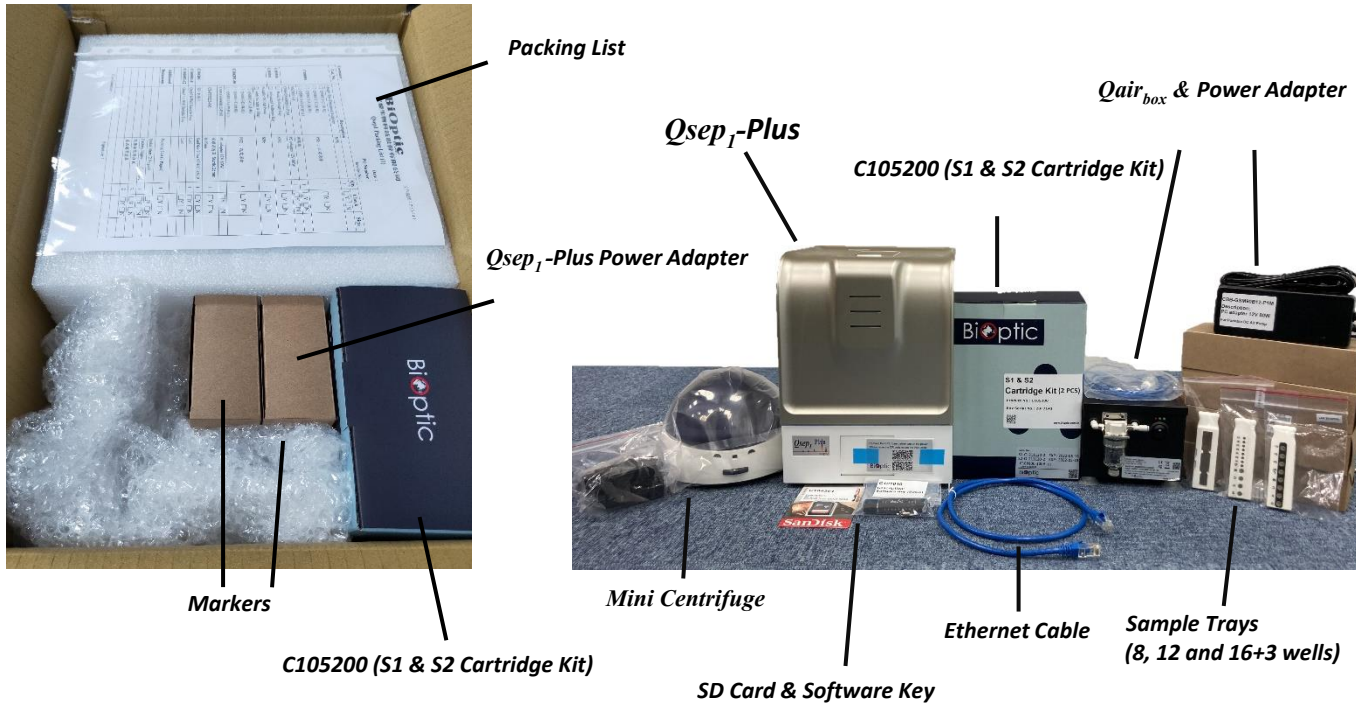
Install $Qsep_1$-Plus

1. Unpack $Qair_{box}$ and tighten the air tube with connector

Connector

2. Plug power cord into $Qair_{box}$
(* Please check the $Qair_{box}$ label on the power cord)

Label

3. Remove the protecting foam before turning on $Qsep_1$-Plus

Remove the EPE foam before turn on the power.
Please scan the QR code to see the instruction:

* Scan the QR code for instruction video

4. Plug the power cord, Ethernet cable and the other side of the air tube into $Qsep_1$-Plus and turn on the $Qair_{box}$ (Please make sure the label on the power cord is $Qsep_1$)
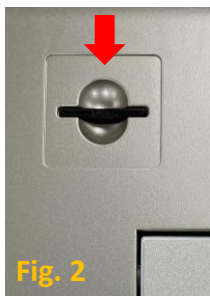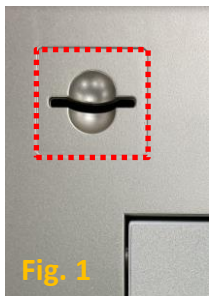
Your $Qsep_1$-Plus is READY TO USE

5. Connect the other side of the Ethernet cable to the operation computer.

*DO NOT switch on the instrument immediately after powering off Wait at least 5 seconds

1. Ensure the SD card is properly inserted in the socket (Fig. 1 and 2).

*SD card needs to be inserted before powering on. The SD card CANNOT be initialized with hot plugging.

Fig. 1   Fig. 2

2. Connect the air tube.

3. Plug the power cord (labeled $Qsep_1$-Plus)

4. Switch on $Qsep_1$-Plus, the LED lights up (multiple color light) (Fig. 3). Wait for 25 seconds until the instrument and Wi-Fi initialized, and the green LED will start flashing (Fig. 4).

*DO NOT switch on the instrument immediately after powering off. Wait at least 5 seconds
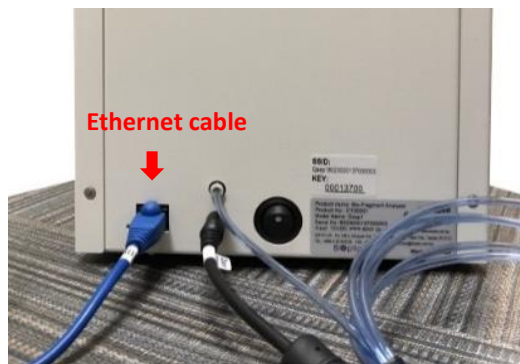

Fig. 3

Blue
Green

Fig. 4

*The green flashing LED shows the instrument is connected. If not, please repeat the step 4.

Ethernet cable connection:
refer to step 5 on Page 2

Ethernet cable

Wi-Fi connection: follow the steps below to connect with $Qsep_1$-Plus

- Check if the AP source is available from your Wi-Fi network in the computer (Fig. 5).

Fig. 5   ENG

- **Find the SSID named with "Qsep1+instrument ID (16 digits)" and click "Connect" (Fig. 6)**

Qsep11751009237180003
Secured

☐ Connect automatically

Connect

Network & Internet settings
Change settings, such as making a connection metered.
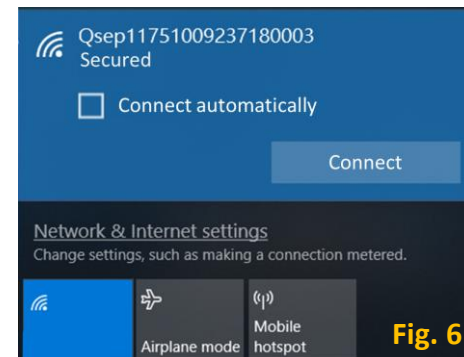
Airplane mode   Mobile hotspot

Fig. 6

- **Enter the password:**
  The password will show in the sticker which is behind the instrument. It is the same as the **middle 8 digits** of instrument serial number (same as SSID name) by blinding the prefixal "Qsep1" (Fig. 7).
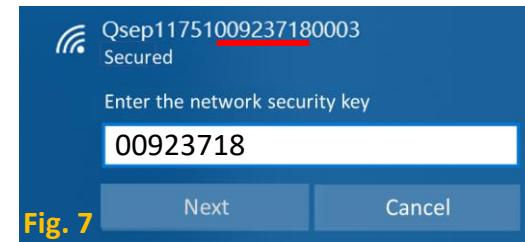

Qsep11751009237180003
Secured

Enter the network security key

00923718

Next   Cancel

Fig. 7

*If the computer cannot find the SSID of $Qsep_1$-Plus, keep the distance between $Qsep_1$-Plus and the computer within 10 meters and start from step 4 again.
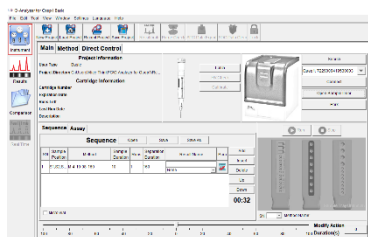
*If the computer cannot connect with $Qsep_1$-Plus
- **Please check the wi-fi IP assignment is "Automatic (DHCP)"**
- **Allow Q-Analyzer pass through firewall or turn off the firewall**

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5. Check the LED status.

6. Double click the icon of *Q-Analyzer*.
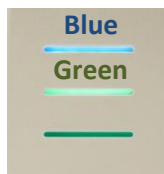
7. *Q-Analyzer* user interface:

7-1. Click "Search", and the instrument ID will display.
   Please confirm the instrument ID is the connected with instrument

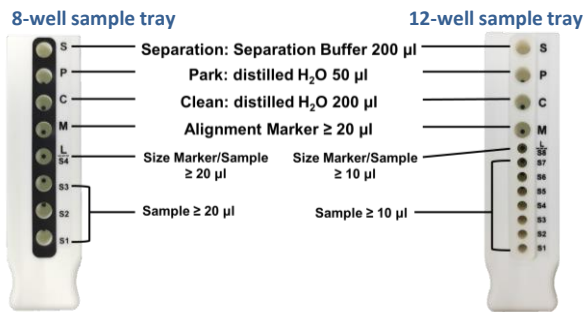**7-2. Click "Connect", the *Qsep₁*-Plus image will change the color when it's connected.**

Packing List of Cartridge Kit (Cat. C105200)

Cartridges
Alignment Maker
Separation Buffer
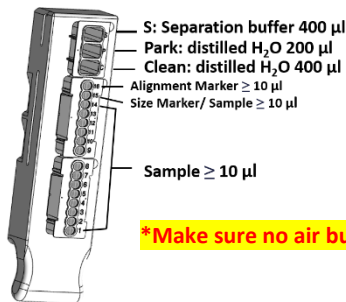Dilution Buffer
Mineral Oil
Buffer Tray
Dropper
0.2 ml tubes

8. For 8-well and 12-well sample tray, prepare buffer and Alignment Marker in 0.2ml PCR tubes and allocate at the corresponding position on the sample tray.

8-well sample tray   **12-well sample tray**

	8-well	12-well
S	Separation: Separation Buffer 200 µl	
P	Park: distilled H₂O 50 µl	
C	Clean: distilled H₂O 200 µl	
M	Alignment Marker ≥ 20 µl	
	Size Marker/Sample ≥ 20 µl	Size Marker/Sample ≥ 10 µl
	Sample ≥ 20 µl	Sample ≥ 10 µl

*For 12-well sample tray, user needs to use 0.1ml tube (C104252) for sample and size marker
*S/P/C well can only place 0.2ml PCR tubes

For 16+3-well sample tray, please use 16+3 Sample Tube (C104254) and follow the instruction below to load the buffers, markers and samples.

S: Separation buffer 400 µl
Park: distilled H₂O 200 µl
Clean: distilled H₂O 400 µl
Alignment Marker ≥ 10 µl
Size Marker/ Sample ≥ 10 µl

Sample ≥ 10 µl

*Make sure no air bubble appears in each tube

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9. Click "Open Sample Door", and the sample door will open automatically.

10. Slide the buffer tray into the instrument. Make sure sample tray is pushed to the end.
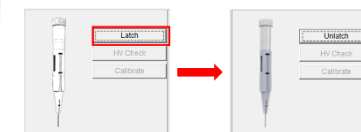

11. Click "Park", and the sample tray will move into instrument.

12. Open the cartridge door by pressing the white button and insert cartridge (guiding groove facing front).
   *Please follow cartridge unpacking guide to unpack the cartridge before using

Guiding groove

13. Close the cartridge door and click "Latch".

*The cartridge information will be displayed after latch.

| Project Information	
User Type	Basic
Project Directory	C:\Users\Alice-ThinkPC\Q-Analyzer for Qsep1\Re...
Cartridge Information	
Cartridge Number	S2-O-210323-2
Expiration Date	2021-Sep-18
Runs Left	192
Last Run Date	2021-Mar-25
Description	Standard cartridge

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14. Cartridge Calibration:
New cartridge need to be calibrated before use.
Please follow the steps below to proceed.

Cartridge Performance Check
⚠ Please finish HV check and calibration before running any sequence.
OK

14-1. Click "HV Check".

Unlatch
HV Check
Calibrate
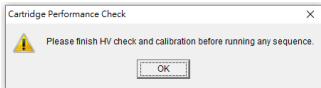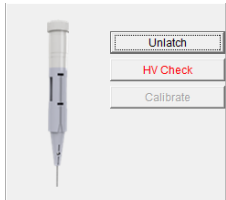
* The storage and transportation condition may influence the Gel-matrix and cause unstable current. During HV Check, check current (gray line) and see if it's stable. if current is unstable, please repeat this step 2-3 times.
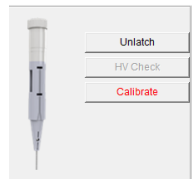
Stable

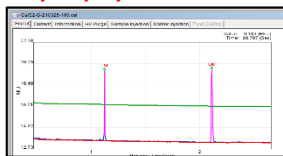Unstable
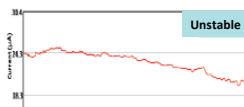
During the "HV Check", the last LED will show red light

Blue
Green
Red

Blue → SD card
Green → WiFi connectable
Red → HV check

14-2. Click "Calibrate".

Unlatch
HV Check
Calibrate

*The "Calibrate" button will only display after HV check
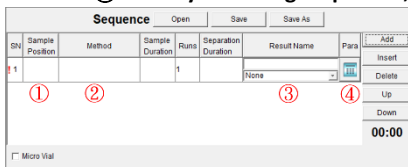
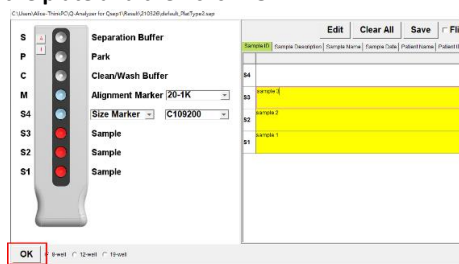Please check the Alignment Marker has been placed in correct position.
Software will recognize peaks from Alignment Marker signal. **DO NOT** use Size Marker or DNA sample doing "Calibrate".

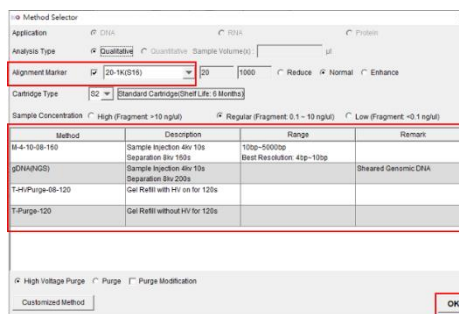* For troubleshooting, please refer to cartridge unpacking guide for details.

15. Click on the blank column and designate ① the sample locations, ② test method, sample duration, runs, ③ result name and ④ Para by following steps 15-1, 15-2, 15-3 and 15-4.

	Sequence	Open	Save	Save As	
SN	Sample Position	Method	Sample Duration	Runs	Separation Duration	Result Name	Para

① ② ③ ④

Add
Insert
Delete
Up
Down
00:00
☐ Micro Vial

15-1. Click the "Sample Position", mark the position of sample on the plate and then click "OK".

S — Separation Buffer
P — Park
C — Clean/Wash Buffer
M — Alignment Marker 20-1K
S4 — Size Marker C109200
S3 — Sample
S2 — Sample
S1 — Sample

Edit Clear All Save Flip

OK ☐ 6-well ☐ 12-well ☐ 16-well

15-2. Click "Method" to select analysis method.

Method Selector

Application ☐ DNA ☐ RNA ☐ Protein
Analysis Type ☐ Qualitative ☐ Quantitative Sample Volume(s) ___ µl
Alignment Marker ☑ 20-1K(S16) ___ 20 1000 ☐ Reduce ☐ Normal ☐ Enhance
Cartridge Type 02 ☐ Standard Cartridge(Shelf Life: 6 Months)
Sample Concentration ☐ High (Fragment: >10 ng/ul) ☐ Regular (Fragment: 0.1 ~ 10 ng/ul) ☐ Low (Fragment: <0.1 ng/ul)

Method	Description	Range	Remark
M-4-10-08-160	Sample Injection 4kv 10s Separation 8kv 160s	100bp~5000bp Best Resolution: 4bp~10bp	
gDNA(NGS)	Sample Injection 4kv 10s Separation 8kv 200s		Sheared Genomic DNA
T-HV/Purge-08-120	Gel Refill with HV for 120s		
T-Purge-120	Gel Refill without HV for 120s		

☐ High Voltage Purge ☐ Purge ☐ Purge Modification
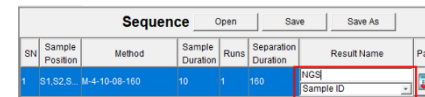Customized Method   OK

* If you want to analyze the samples with Alignment Marker, please choose the appropriate Alignment Marker and then place it in the corresponding position. (Check ✓ the box)
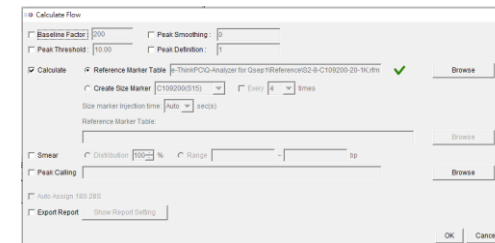
Contact Information:
Company Name: BiOptic Inc.
Office Address: (23141) 5F., No.6, Ln. 130, Minquan Rd., Xindian Dis., New Taipei City, Taiwan
Factory Address: (23141) 4F., No.108-3,Minquan Rd., Xindian Dist., New Taipei City, Taiwan
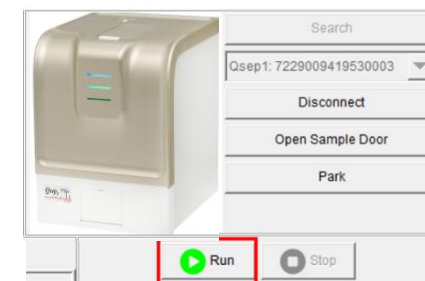**Tel: +886-2-2218-8726, Fax: +886-2-2218-8727, E-mail: service@bioptic.com.tw**

15-3. Click on "Result Name" and enter the name of result files.

	Sequence	Open	Save	Save As	
SN	Sample Position	Method	Sample Duration	Runs	Separation Duration	Result Name	Para
1	S1,S2,S..	M-4-10-08-160	10	1	160	NGS / Sample ID	

15-4. Click the icon "Para" and set the parameters. (Baseline Factor, Peak Threshold, Calculate, etc.).

Calculate Flow

☐ Baseline Factor 200   ☐ Peak Smoothing 0
☐ Peak Threshold 10.00   ☐ Peak Definition 1
☑ Calculate ☐ Reference Marker Table e-ThinkPC\Q-Analyzer for Qsep1\Reference\S2-8-C109200-20-1K.cfm ✓ Browse
☐ Create Size Marker C109200(S15) ☐ Every 4 ☐ times
Size marker injection time Auto ☐ sec(s)
Reference Marker Table:
☐ Smear ☐ Distribution 100 ☐ % ☐ Range ___ ~ ___ bp
☐ Peak Calling
☐ Auto Assign 18S 28S
☐ Export Report Show Report Setting
OK Cancel

16. Click "Run" to start the process.

Search
Qsep1: 7229009419530003 ▼
Disconnect
Open Sample Door
Park
▶ Run ⬛ Stop

Brief introduction of the Signal Chart:

Current Unit
← Related Fluorescence Unit
Current (gray line)
Fluorescence Intensity (red line)