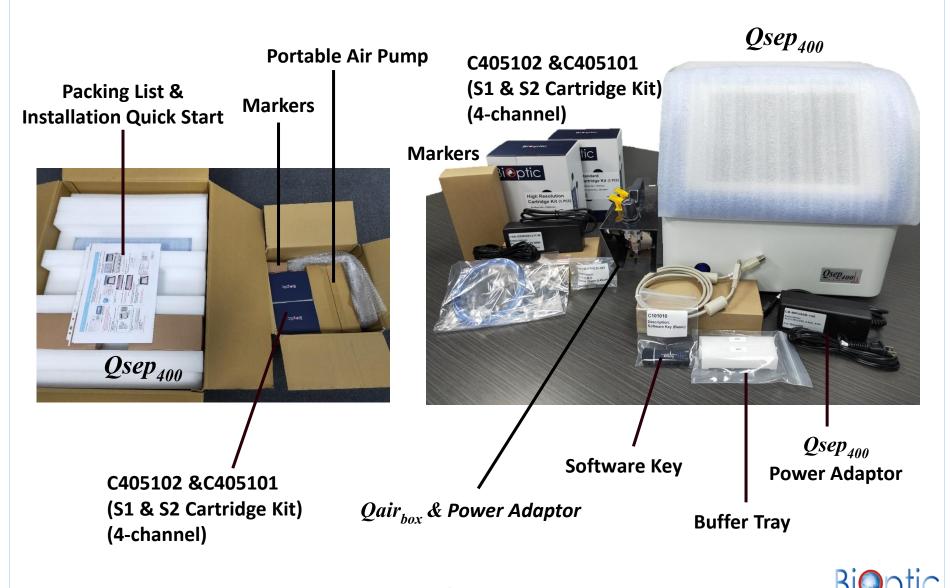
## **Installation Quick Start**

Document No.: F0028 Ver.: ENG-E



\*Two persons or proper transportation tool (trolly) is needed to move/transport the equipment.

# $Qsep_{400}$ Installation Quick Start

4.

# \*\* Please follow the instructions to remove the fixture and packing materials before inserting the power plug to avoid serious damage of the instrument.

1. Open the box and remove all the documents, accessories and upper cushioning material.





2. Gently move the instrument out of the box.





3. Hold and lift the blue frame of the front panel and unscrew the fixture securing screws.

\*\*Sample plate holder is secured by the fixture. Remove the fixture before plugging in the power adaptor and starting the instrument or it may cause system damage.



Push the sample plate holder to the right and remove the fixture.



\*\*Before moving the instrument, the sample plate holder needs to be secured by the fixture to avoid system damage. Please keep the fixture and screws for later use.

5. a. Carefully remove the blue tape and the wrap around the front panel.b. Remove the sticker covering the power entry and plug in the power adaptor.

а.



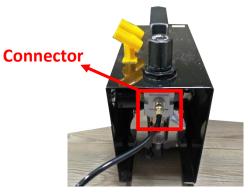


b.



# $Qsep_{400}$ Installation Quick Start

1. Unpack portable air pump and tighten the air tube with connector



2. Plug the power cord into  $Qsep_{400}$ (Please make sure the label on the power cord is labeled  $Qsep_{400}$ ) 3. Plug the other side of the air tube into  $Qsep_{400}$ 





Turn on the power of  $Qsep_{400}$  and portable air pump

Your  $\mathit{Qsep}_{400}$  is READY TO USE

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



### Re-pack $Qsep_{400}$ before moving

- 1. Remove buffer tray, samples and cartridge from the instrument
- 2. Click "Lock" and sample tray will move to initial position



- 3. Turn off  $Qsep_{400}$  and hold the front panel
- 4. Pull the sample tray to left side and lock the fixture



# **Operation Quick Start**

### 1. Turn on the power.



The message box of "Purge Function Check" will pop up once connected. Follow the instructions to proceed. It is recommended to perform the check every 6 months.



- 2. Buffer and Alignment Marker preparation:
- 2-1. Add Separation Buffer into "S" wells and add diH<sub>2</sub>O into P and W/C wells.



- **X** Use the droppers to fill the wells.
- **※** Each well should be 80% full. Overfilling or having droplets left on the dividers will conduct the current and will be hard to keep track of the changes.
- 2-2. Alignment Marker (AM) preparation: Add ≥ 20 μl Alignment Marker into 0.2 ml tubes (4 tubes) and add 10 μl Mineral Oil on top of them.

**X** Make sure there is no air bubble in the 0.2 ml PCR tubes.

### 3. Click "Change Sample/Buffer".



4. Allocate the buffer tray into the tray holder.



- 5. Allocate Alignment Marker in "AM" row on the holder.
- Make sure Alignment Markers are placed in the assigned positions.
  Make sure to use individual 0.2 ml PCR tubes for Alignment Markers and Size Markers.

	20-1k (C109100)	
ANA 01 (marking 1 4 7 10)	20-5k (C109102)	s s
AM-01 (position 1, 4, 7, 10)	20-1.5k (C109109)	W/C
	20-15k (C109110)	
AM-02 (position 2, 5, 8, 11)	RNA-LM (C109120)	
Alvi-02 (position 2, 5, 8, 11)	Protein-LM (C104605)	
AM-03 (position 3, 6, 9, 12)	User Define AM	

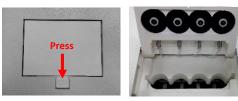
- 6. Hold the holder and use the thumb to press the Alignment Marker tubes tightly down into the well.
- Allocate the samples (sample volume ≥ 20 μl). Spin down and make sure the sample is down at the bottom of the tube and no air bubble appears.
- % The lid of 0.2 ml tube that placed at A1-A12 positions must be removed/cut.



8. Click "Park" to move the holder back to the park position.

### 9. Unpack Cartridge:

Please follow the steps of "Unpacking Guide" in the cartridge box. Once done, open the cartridge door and insert multi-channel cartridge.





- \* L-shaped connector of the cartridge should follow the L-shaped guiding groove inside the instrument.
- 10. Close the cartridge door.
- 11. Click "Latch".
  - The cartridge information will be displayed on the screen.



#### Main Method Direct Control





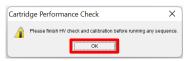
### Bio–Fragment Analyzer : *Qsep<sub>40</sub>*

# **Operation Quick Start**

#### 11-1. New Cartridge Calibration:

New cartridge needs to be calibrated before use. Please follow the steps below to proceed.

1. Click "OK"



2. Click "HV Check"



- The storage and transportation condition may influence the gel-matrix and cause unstable current. If the current (gray line) is unstable during HV check, please repeat this step 2-3 times.
- 3. Click "Calibrate"
- **%** Make sure the Alignment Markers (C109200) have been placed in the correct positions.
- 12. 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 12-1 to 12-4.



12-1. Click "Sample Position" and mark the positions of samples on the plate and then press "OK".



12-2. Click "Method" to select the analysis method.

Plate type	95-well C 8-well @ 123-wel	I C 12-well	
Analysis type 🕜	bualitative C quantitative San	ple volume (x) :	μ
Alignment Marker 🕅	20-1K(AM-01)	0 1000 C Red	uce @ Normal C Enhance
Cartridge Type S2	▼ Standard cartridge(Shelf Li	le: 6 Months)	
Sample concentration	High (> 10 ng/µl) (#	Regular (0.1 ~ 10 nglul)	○ Low (< 0.1 ng/µl)
Method	Description	Range	Remark
M-4-10-08-160	Sample Injection 4kv 10s Separation 8kv 160s	15bp~5000 bp Best resolution: 4bp~10bp	
M-4-10-10-120	Sample Injection 4kv 10s Separation 10kv 120s	10bp-5000 bp Best resolution: 10bp-50bp	
gDNA(NGS)	Sample Injection 4kv 10s Separation 8kv 200s		Sheared genomic DNA
T-HMPurge-08-120	Gel refill with HV on for 120s		
T-Purge-120	Gel refill without HV for 120s		
	Purge   Purge Modification		

- ※ To analyze the samples with Alignment Marker, check ✓ the box and choose the appropriate markers. Once done, place them in the corresponding positions.
- 12-3. Enter the "Result Name".

SN	Sample	Method	Sample	Runs	Separation	Result Name	Para	Add
	Position		Duration		Duration	test		Insert
1	A-01	M-4-10-06-3	10	1	300	Interne	7	Delete
								Up
								Down
								00.00

12-4. Click the icon "Para" and set the parameters. (Baseline Factor, Peak Threshold, Calculate, etc.)

Peak Thresho	Id: 10.00 Peak Definition: 3	
7 Calculate	Reference marker table  IAshieylQ-Analyzer for Qsep400/Reference/S2-8-C109200-20-1K.rfm	Browse
	C Create size marker C100200(088-01) → □ Every 4 → times	
	Size marker injection time Auto * sec(s)	
	Reference marker table	
		Browse
Smear	C Distribution 100- % C Range - bp	
Peak calling		Browse
Auto Assign 1		

### Calculate

- Reference marker table: based on built-in size marker data.
- Create size marker: place size markers in "SM" row on the holder to create size marker data.

### 13. Click "Run" to start the analysis.



### 14. Check the results.

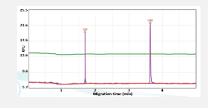
Relative	e Fluorescence Unit
43	Current (gray line
25	Current un
16	
	Mu

### Fluorescence Intensity (red line)

### **During Calibration**

Check if the alignment markers have been placed in the correct positions.

Software will recognize two Alignment Marker signals. DO NOT use Size Marker or DNA sample to "Calibrate".





### Notice!!! Before opening the cartridge door, "unlatch" first.

Please wait a few sec before you open catrtridge door

5. A.



 $\times$