User Guide
Standard (L2) Cartridge Kit for *Qsep*$_1$-Lite (C105201-L)

A. Specifications

Specification	Description
DNA Sizing Range	20-1,000 bp
L.O.D	1 ng/µL
Resolution*	4-10 bp
Sample Number	200 runs
Shelf Life	6 months

* Best resolution is determined by the 15-622 DNA Size Marker (C109200).

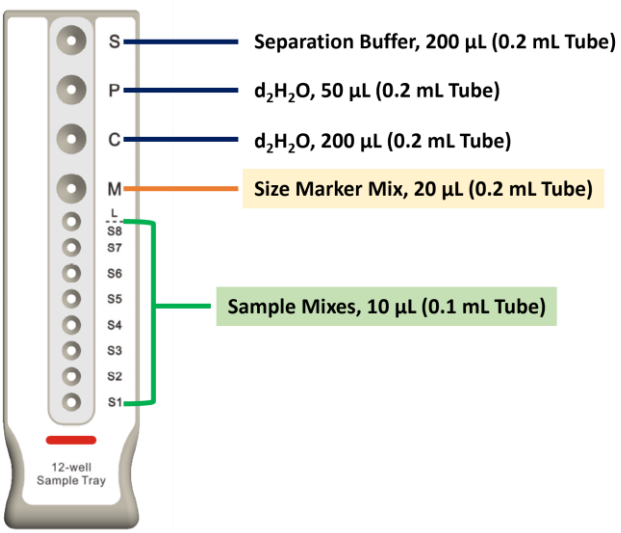
B. Kit Components and Storage Conditions

Item	Storage Condition
Standard Cartridge*2 (C105201-L)	4-30˚C (Do Not Freeze)
20-1,000 bp Alignment Marker *2 (C109100-1900AL, 1900 µL)	Short-Term (≤ 3 months): 4-30˚C Long-Term (> 3 months): -20˚C
15-622 bp Size Marker (109200-100L, 100 µL)	4-30˚C
Separation Buffer (C104406, 50 mL)	4-30˚C
0.1 mL Tube (4-STRIP) *5 (C104252)	-

C. Cartridge Unpacking Preparation

The new cartridge must undergo HV check and calibration. Please follow the instructions provided in the unpacking guide and calibrate using C109100 Alignment Marker.

D. Sample Tray Setup



- **Ensure the buffer tray is pushed to the end until the color bar aligns with the edge of the holder.**

1. Compatible Sample Tubes

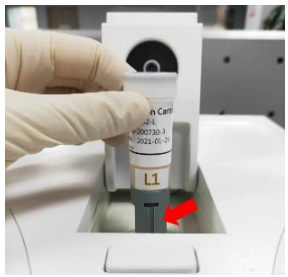
Name	Cat. No.	Volume	Image
0.2 mL PCR Tube	-	≥ 20 µL	
0.1 mL Strip Tube	C104252	≥ 10 µL	

2. Marker and Sample Preparation

- Size Marker Mix:
  - 15-622 bp Size Marker (C109200): 4 µL
  - 20-1,000 bp Alignment Marker (C109100): 16 µL
- Sample Mix:
  - Sample: 2 µL ***Should be placed in 0.1 mL Tube first**
  - 20-1,000 bp Alignment Marker (C109100): 8 µL
- **Stored at room temperature for 3 days or at 4˚C for 1 week.**

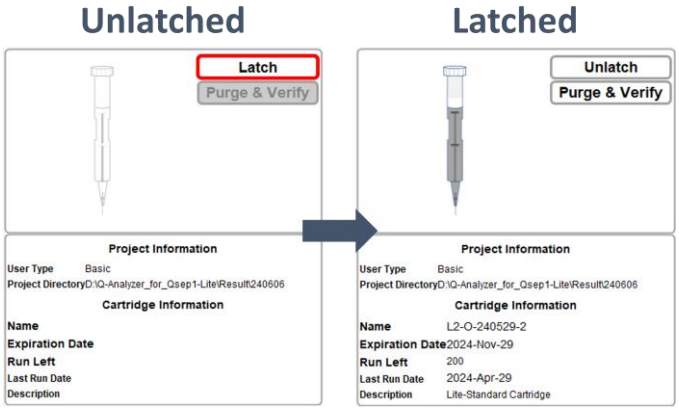
E. Cartridge Setup

1. Push the button to open the cartridge door and insert the cartridge. Close the cartridge door to proceed.



- **The guiding groove of the cartridge should face the front.**

2. Click "Latch" to secure the cartridge in place. The cartridge information will be displayed.



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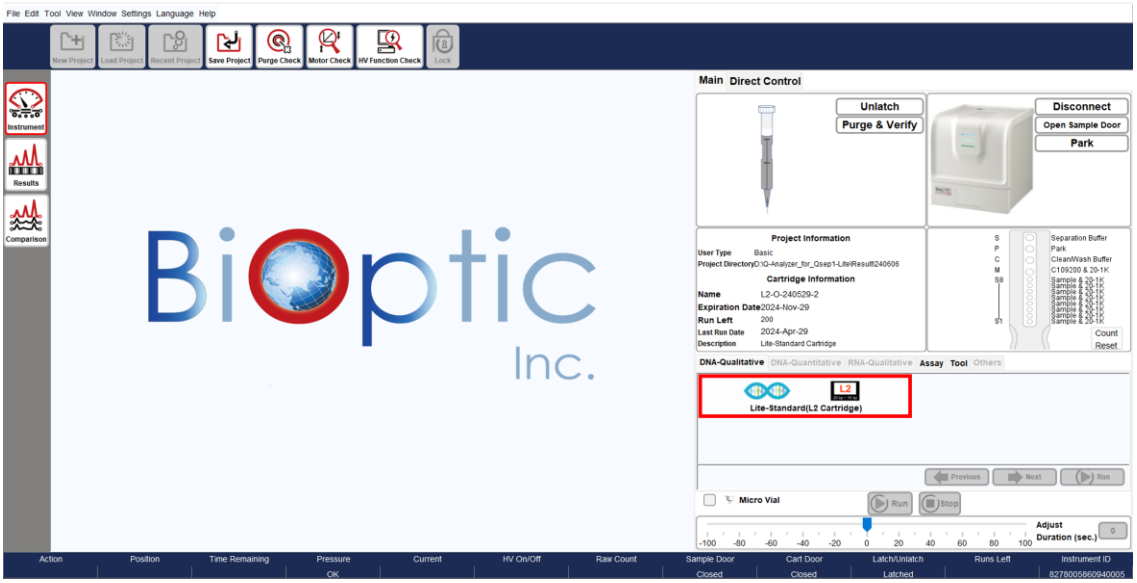
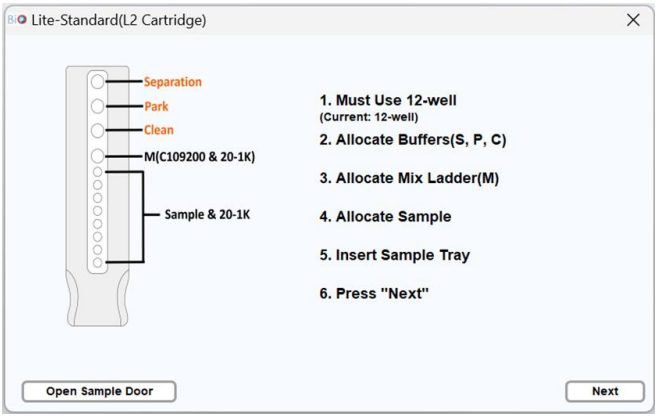
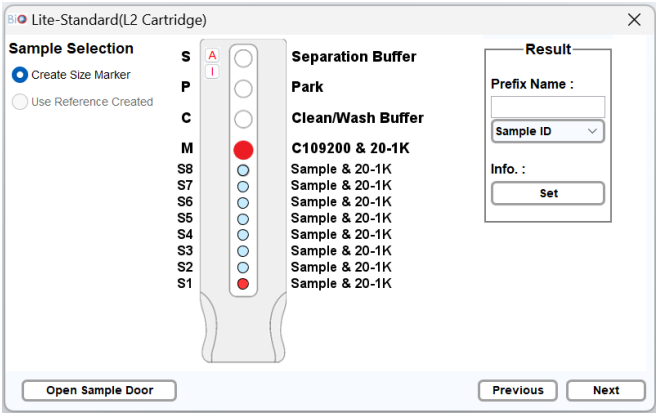
F. Software Operation Guide



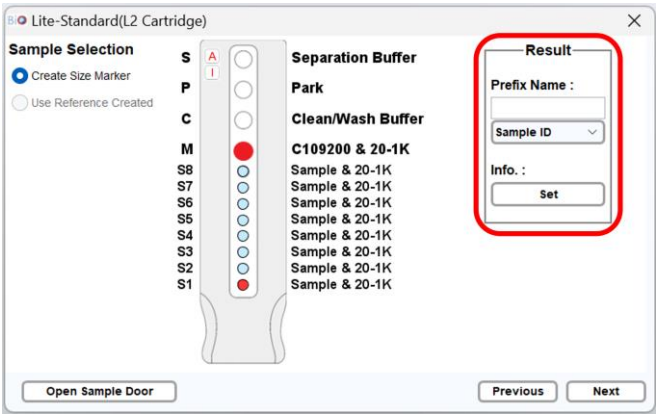
1. Sample Tray: Allocate pre-prepared buffers, size marker mix, and sample mix on the 12-well sample tray. Insert the sample tray to proceed.



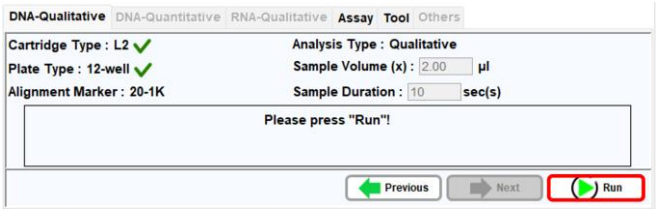
2. Sample Position: Select your desired sample position. Note that the size marker needs to be created every 24 hours.



3. Result Name: Specify the result file name and sample information.



4. Click “Run” to start the analysis.



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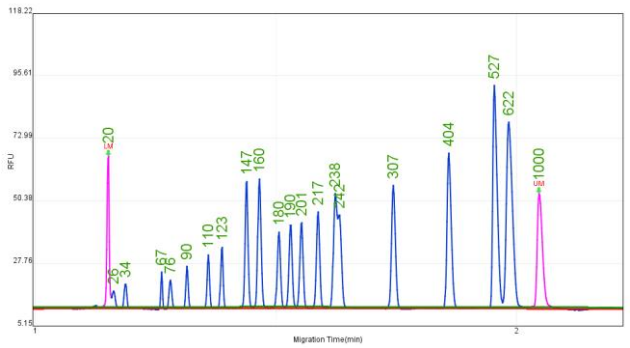
G. Size Marker Mix Result

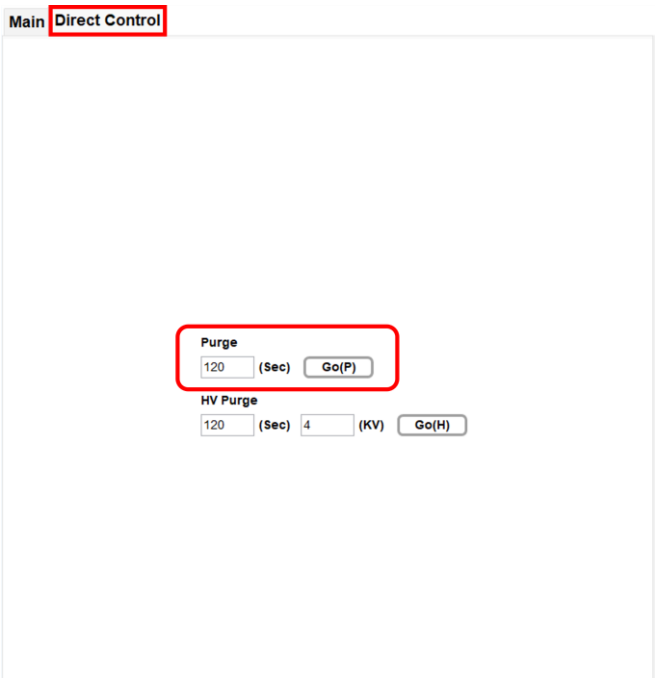


H. Troubleshooting

Before attempting any troubleshooting, ensure that the system is functioning properly and that all operations are following the instructions.

If encountering unstable current during sample injection or separation steps, which may be caused by unknown substances in PCR reagent buffer or other kit buffers, consider the following solutions:

1. Dilute the sample using d_2H_2O or TE buffer.
2. Centrifuge the sample for a period to allow residues to accumulate at the bottom of the tube.
3. Perform a 120-second Purge by going to Direct Control tab or Tool.



I. Cartridge Disposal

Please wear gloves before discarding the cartridge.

1. Bend the cartridge tip.
2. Open the cap on the gel reservoir and remove the inner cap.
3. Pour the gel into the chemical waste container.
4. Dispose of the cartridge in the trash bin.

Contact Information:
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