

User Guide

High Resolution (S1) Cartridge Kit (C105102/C105202/C105802)

A. Specifications

Specification	Description
DNA Sizing Range	20-5,000 bp
L.O.D	0.1 ng/μL
Resolution*	1-4 bp
Sample Number	200 runs
Shelf Life	6 months

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

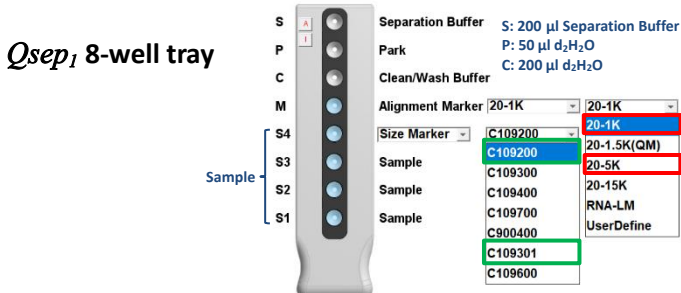
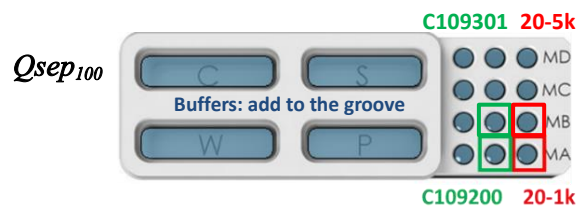
B. Kit Components and Storage Conditions

Item	Storage Condition
High Resolution Cartridge (C105102/C105202/C105802)	4-27°C (Do Not Freeze)
20-1,000 bp Alignment Marker (C109100-500A, 100 μL)	Short-Term (≤ 6 months): 4-27°C Long-Term (> 6 months): -20°C
Separation Buffer (C104406, 50mL/C104403, 250mL)	4-27°C
Dilution Buffer (C104405, 15mL/C104402, 50mL)	4-27°C
Mineral Oil (C104404, 8mL/C104401, 25mL)	4-27°C

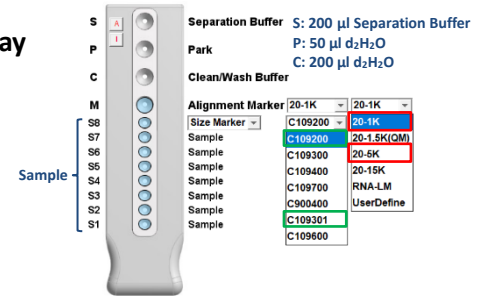
C. Cartridge Unpacking Preparation

New cartridge must pass HV check and calibration before use. Please follow unpacking guide to unpack and use C109100-500A Alignment to do calibration.

D. Buffer and Marker Preparation

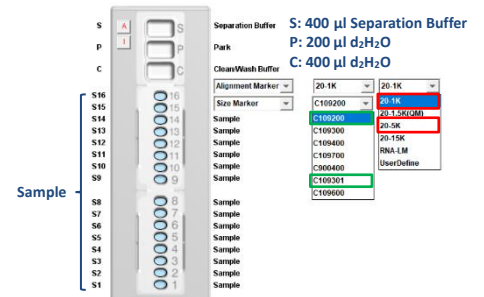


Qsep1 12-well tray



Qsep1-Plus

16+3 well tray



E. Sample Preparation

Sample Volume Requirements

0.2 mL Tube: 20 μL Micro Vial (C104250): 2 μL
0.1 mL Tube: 10 μL 16+3-Well Tube (C104254): 10 μL

Recommended Sample Concentration

Fragment sample: 0.1-10 ng/μl

***NOTE: If fragment sample concentration is over 10 ng/μl, dilute sample 10X with 1X dilution buffer.**

***NOTE: If sample is eluted in water, add dilution buffer to make the sample into 0.2X or 0.1X dilution buffer condition.**

E-1. Sample size range from 20 bp to 1,000 bp

Marker required:

20 bp-1000 bp Alignment Marker (C109100): 20 μl
15-622 bp Size Marker (C109200): 20 μl

E-2. Sample size range from 20 bp to 5,000 bp

Markers required:

20 bp-5000 bp Alignment Marker (C109102): 20 μl
50 bp-3000 bp Size Marker (C109301): 20 μl

***NOTE: If sample is eluted in nuclease-free water, using 1X dilution buffer to dilute the sample is suggested.**

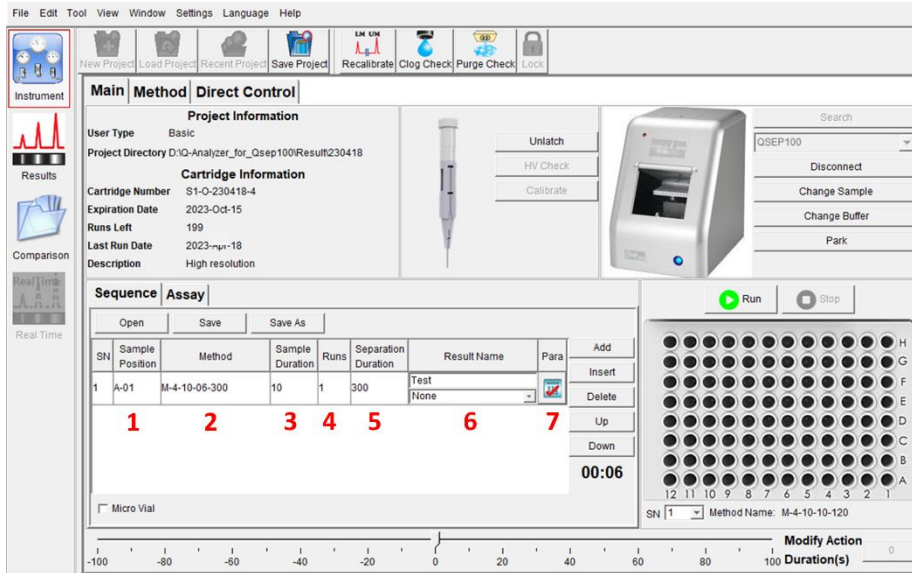
Contact Information:

Company Name: BiOptic Inc.
Address: (23141) 5F., No.6, Ln. 130, Minquan Rd., Xindian District, New Taipei City, Taiwan (R.O.C)
Tel: +886-2-2218-8726, Fax: +886-2-2218-8727, E-mail: service@bioptic.com.tw

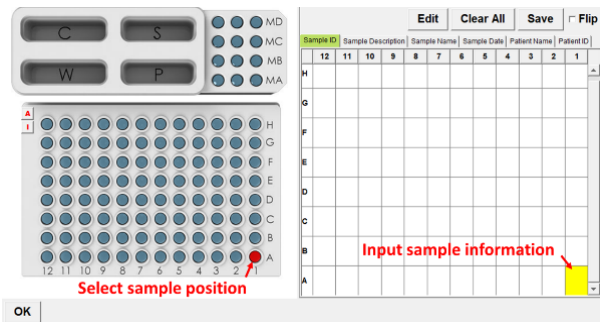
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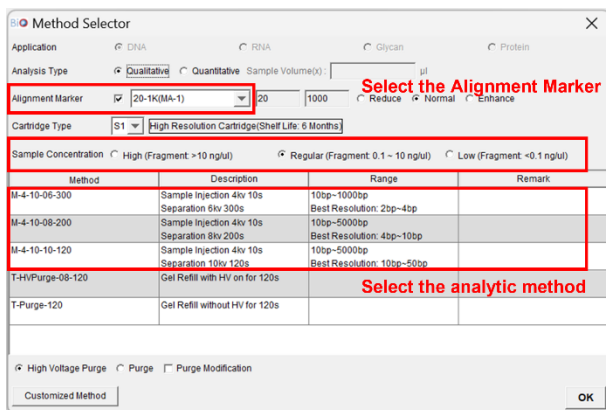
F. Software Operation



- Place the sample and select corresponding position, and then input sample information if necessary.



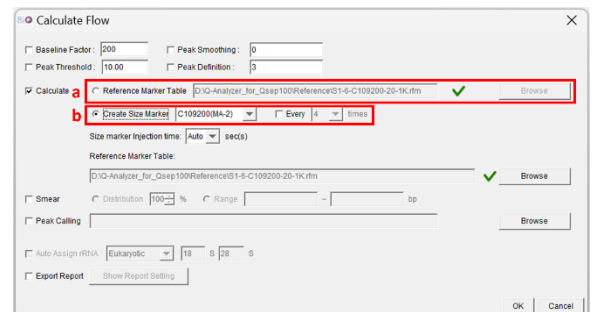
- Select the alignment marker and the analytic method in Method Selector.



*NOTE: Based on sample concentration to adjust injection condition.

Sample concentration	High (2kv, 10s)	Regular (4kv, 10s)	Low (8kv, 10s)
Fragment DNA	> 10 ng/μl	0.1~10 ng/μl	0.01~0.1 ng/μl

- Sample Duration: adjust the sample injection time to increase/decrease injection amount.
***NOTE: Do not set the injection time over 20 sec.**
- Runs: repetition time.
- Separation Duration: adjust the duration to extend/reduce the separation time.
***NOTE: Step 3-5 are optional.**
- Input the result name for result file.
- Click "Para" . Choose to use (a) reference or (b) create size marker to do the calculation.



*NOTE: When using function "Create Size Marker", select the size marker you use. E.g. 20-1k is paired with C109200, 20-5k is paired with C109301.

- Click "Run" to start the analysis.

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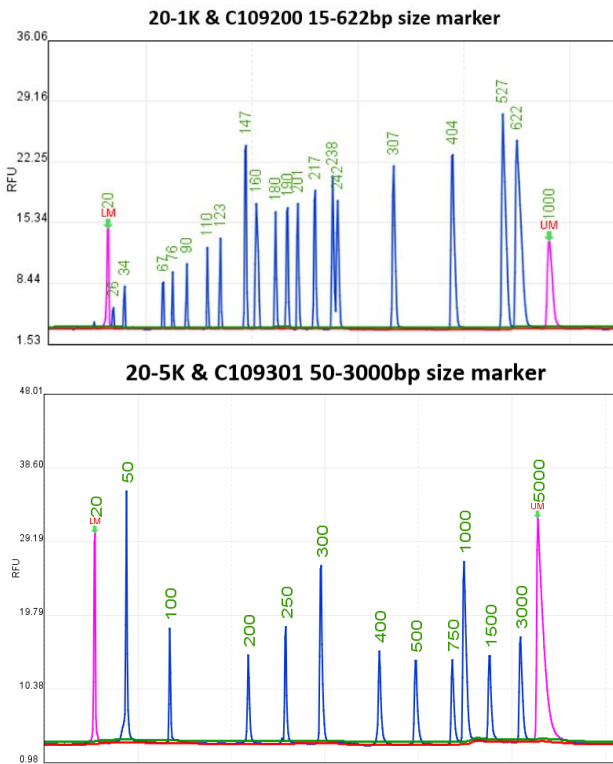
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G. Result and Application

- Alignment Marker & Size Marker**



H. Troubleshooting

Please ensure that the system is working well, and the operation is following the instructions first.

Sometimes, there are some unknown substances in PCR reagent buffer or other kit buffer. These substances might cause unstable current at sample injection or separation steps. Here is a list of solutions to help fix the occurrence.

1. Use dilution buffer to dilute the sample.
2. Centrifuge the sample for a while to make the residues accumulate at the bottom of the tube.
3. Insert a "T-purge-120" method between several sample runs. E.g. insert 1 run "T-Purge-120" every 5-10 sample runs.

Sequence	Assay							
Sequence Open Save Save As								
SN	Sample Position	Method	Sample Duration	Runs	Separation Duration	Result Name	Para	Add
1	A-01.A-0.	M-4-10-06-300	10	1	300	Test None		Insert Delete
2		T-Purge-120	0	1	0	Test None		Up
3	A-05.A-0.	M-4-10-06-300	10	1	300	Test None		Down
e.g. Insert 1 run "T-Purge-120" every 5-10 sample runs								00:50
<input type="checkbox"/> Micro Vial								

I. Cartridge Discard

Please wear gloves before discarding cartridge.

Gel reservoir



Cartridge tip

1. Bend the cartridge tip.
2. Open the cap on gel reservoir and remove the inner cap.
3. Pour the gel into the chemical waste container.
4. Cartridge can be thrown into the bin.

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