User Guide
High Sensitivity Quantitative Cartridge Kit (C105105-Q/ C105205-Q)

A. Specifications

Specifications	Description
Sample Volume Requirement	≧2 µL
DNA Sizing Range	20-1500 bp
DNA Sizing Precision*	2% CV
Fragment DNA Concentration Range**	10 pg/ µL to 500 pg/ µL
Smeared DNA Concentration Range**	50 pg/ µL to 1000 pg/ µL
DNA Quantitative Precision*	4% CV

* Determined by the DNA ladder (15-622 DNA Size Marker, C109200) as sample.
** Best Quantitative Range: 10-200 pg/µL (Fragment DNA); 50-500 pg/ µL (Smeared DNA)

B. Kit components and storage conditions

Contents	Storage Conditions
High Sensitivity Cartridge (N1)	4°C~27°C (Do Not Freeze)
Quantitative Marker (20 bp & 1500 bp, C109109-60Q)*	-20 °C
Size Marker (15-622 bp, C109200-50)*	-20 °C
Separation Buffer (C104406)	4°C~27°C
Dilution Buffer (C104405)	4°C~27°C
Mineral Oil (C104407)	4°C~27°C

*Short-Term Storage (≦ 3 months): 4°C ~ 27°C ; Long-Term Storage: -20°C

C. Cartridge preparation

New cartridge: please follow cartridge unpacking guide to unpack cartridges and do HV check.

*§ **Note:** Please mix 5 µL Quantitative Marker (20 bp-1500 bp, C109109-60Q) and 15 µL dilution buffer in 0.2 mL regular PCR tube for cartridge calibration. Place Quantitative marker mixture at corresponding position.*

Instrument	Position	
$Qsep_{400}$	AM01, 04, 07, 10	
$Qsep_{100}$	MD1	
$Qsep_{1}$	8-wells: M	12-wells: M

D. Sample preparation

- Sample size must be between 20 bp to 1500 bp.

Material requirement:

- Quantitative Marker (20 bp & 1500 bp, C109109-60Q)
- 15-622 bp Size Marker (C109200-50)
- Dilution Buffer (C104405)

Size Marker preparation:

1. Dilute Quantitative Marker (C109109-60Q) and Size Marker (C109200-50) 10x by dilution buffer (C104405).

2. Mix 10x diluted Quantitative Marker and 10x diluted Size Marker according to below table:

Materials	Volume (µL)
10x diluted Quantitative Marker (20 & 1500 bp, C109109-60Q)	5
10x diluted Size Marker (15-622 bp) (C109200-50)	10
Dilution Buffer (C104405)	5
Total	20

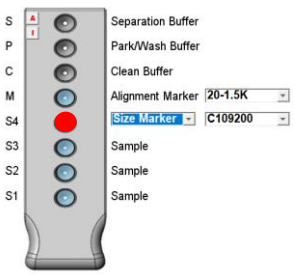
Place size marker mixture at corresponding position.

Instrument	Position	
$Qsep_{400}$	SM01, 04, 07, 10	
$Qsep_{100}$	MA2	
$Qsep_{1}$	8-wells: S4	12-wells: S8

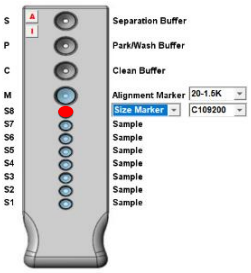
$Qsep_{400}$

$Qsep_{100}$

$Qsep_{1}$



8-wells sample tray



12-wells sample tray

§ Note:
Please set up alignment marker as 20-1.5K and S4/ S8 position as Size Marker and C109200 on $Qsep_{1}$.

Sample preparation:

Mix 10x diluted Quantitative Marker with samples according to below table:

Materials	Volume (µL)
10x diluted Quantitative Marker (20& 1500 bp, C109109-60Q)	5
Sample	X (2~15)
H_2O	15-X (0~13)
Total	20

*§ **Note:** Size Marker should be placed at regular 0.2 mL PCR tube. For $Qsep_{1}$ 12-wells sample tray of $Qsep_{1}$, size marker and samples should be loaded at 0.1 mL strip tube (C104252).*

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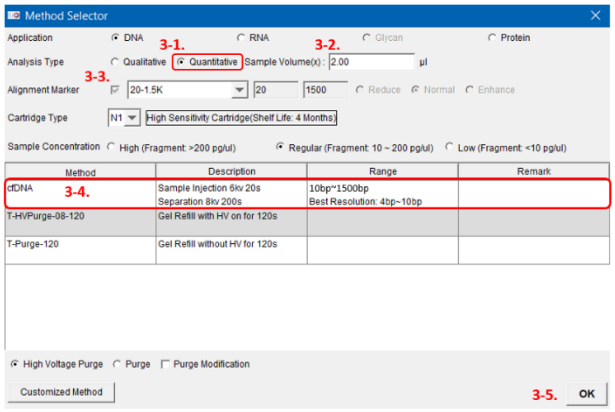
E. Software Operation

1. Place sample and select corresponding position.
2. Enter Sample information (optional).
3. Set up analytic method.
   - 3-1. Select analytic method "Quantitative".
   - 3-2. Enter sample volume (X).
   - 3-3. Select Quantitative Marker (20-1.5K)
   - 3-4. Select method “cfDNA”.
   - 3.5. Click OK.



4. Click Run to start analysis. 

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