



Caliper LifeSciences

HT DNA LabChip[®] Kit, Version 2 LabChip GX/GXII User Guide

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Specifications

HT DNA 1K Specifications

Sizing Range	25 – 1000 bp
Sizing Resolution¹	± 5% from 150 – 600 bp ± 10% from 100 – 150 bp, 600 – 1000 bp ± 15% from 25 – 100 bp
Sizing Accuracy	± 10%
Sizing Precision	5% CV
Linear Concentration Range	0.1 ng/μL – 50 ng/μL per fragment
Sensitivity	0.1 ng/μL
Maximum Total DNA Concentration	80 ng/μL total, 50 ng/μL per fragment
Carry-Over	< 0.25%
Quantitation Accuracy	± 30% or ± 1 ng/μL, whichever is greater
Quantitation Precision	20% CV from 25 – 500 bp, 10% CV from 500 – 1000 bp
Chip Lifetime²	2000 samples per chip
Number of Samples per Chip Prep	400 samples (four 96-well plates or one 384-well plate)

HT DNA 5K Specifications

Sizing Range	100 – 5000 bp
Sizing Resolution¹	± 10% from 150 – 500 bp ± 15% from 100 – 150 bp, 500 – 1500 bp ± 20% from 1500 – 5000 bp
Sizing Accuracy	± 10%
Sizing Precision	5% CV
Linear Concentration Range	0.25 ng/μL – 50 ng/μL per fragment
Sensitivity	0.25 ng/μL
Maximum Total DNA Concentration	80 ng/μL total, 50 ng/μL per fragment
Carry-Over	< 0.5%
Quantitation Accuracy	± 30% or ± 1 ng/μL, whichever is greater
Quantitation Precision	20% CV
Chip Lifetime²	2000 samples per chip
Number of Samples per Chip Prep	400 samples (four 96-well plates or one 384-well plate)

¹ Resolution is defined as half height or better separation of two peaks. Actual separation performance can depend on the sample and application. Peaks that are resolved less than half height can still be accurately identified by the system software.

² Expected chip lifetime is based on use under normal laboratory conditions and adherence to Caliper preparation protocols, sample guidelines and storage conditions. Individual results may vary.

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HT DNA 12K Specifications

Sizing Range	100 – 12000 bp
Sizing Resolution¹	± 10% from 150 – 1000 bp ± 15% from 1000 – 2000 bp ± 20% from 2000 – 8000 bp ± 25% from 100 – 150 bp, 8000 – 12000 bp
Sizing Accuracy	± 10%
Sizing Precision	5% CV
Linear Concentration Range	0.25 ng/μL – 50 ng/μL per fragment
Sensitivity	0.25 ng/μL
Maximum Total DNA Concentration	60 ng/μL total, 50 ng/μL per fragment
Carry-Over	< 0.5%
Quantitation Accuracy	± 40% or ± 1 ng/μL, whichever is greater
Quantitation Precision	20% CV from 100 – 5000 bp, 25% CV from 5000 – 12000 bp
Chip Lifetime²	2000 samples per chip
Number of Samples per Chip Prep	400 samples (four 96-well plates or one 384-well plate)

Sample Conditions

Additives	Caliper recommends that BSA and detergents exceeding 0.05 mg/mL and 0.01% (v/v) respectively in concentration not be used. Higher concentrations can result in chip failure. In addition, non-aqueous solvents are not compatible with DNA LabChip protocols.
Particulates	All sample plates should be spun down prior to analysis. All buffers should be filtered with a 0.22 μm cellulose acetate filter.
Salt Concentration	Total salt concentration must not exceed 125mM.
Plasmids	Plasmid concentration in samples must be below 20 ng/μL. Please note that although the HT DNA Assays cannot analyze plasmids, the presence of plasmids above 20 ng/μL can interfere with assay results.

¹ Resolution is defined as half height or better separation of two peaks. Actual separation performance can depend on the sample and application. Peaks that are resolved less than half height can still be accurately identified by the system software.

² Expected chip lifetime is based on use under normal laboratory conditions and adherence to Caliper preparation protocols, sample guidelines and storage conditions. Individual results may vary.

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HT DNA Reagent Kit (Part Number DNA 1K(760526), DNA 5K(760566), DNA 12K(760569))

Item	Vial	Quantity
DNA Dye Concentrate	Blue	1 vial of 0.08 mL
Chip Storage Buffer	White	5 vials, 1.8 mL each
DNA Gel Matrix	Red	3 vials, 1.6 mL each
10X DNA Ladder	Yellow	1 vial, 0.15 mL
DNA Marker	Green	1 vial, 1.5 mL
Spin Filters	—	8 spin filters

HT DNA LabChip Kit, Version 2 (Part Number DNA 1K/12K (760517), DNA 5K (760435))

DNA Chip	—	1
Ladder Tubes	—	10, 0.2 mL PCR tubes
Centrifuge Tubes	—	5, 2.0 mL centrifuge tubes
Detection Window Cleaning Cloth	—	1 clean room cloth
Swab	—	3
Buffer Tubes	—	10, 0.75 mL tubes

Safety Warnings and Precautions

! WARNING ! For Research Use Only. Not recommended or intended for diagnosis of disease in humans or animals. Do not use internally or externally in humans or animals.

CAUTION We recommend that this product and components be handled only by those who have been trained in laboratory techniques and that it is used in accordance with the principles of good laboratory practice. As all chemicals should be considered as potentially hazardous, it is advisable when handling chemical reagents to wear suitable protective clothing, such as laboratory overalls, safety glasses, and gloves. Care should be taken to avoid contact with skin or eyes. In case of contact with skin or eyes, wash immediately with water.

! WARNING ! Dye Concentrate contains DMSO. S24/25: Avoid contact with skin and eyes.

Storage: When not in use, store chips and reagents refrigerated at 4 °C.
Do not leave chips and reagents unrefrigerated overnight.

Preparation Procedures

Additional Items Required

- MilliQ water: Molecular biology grade or better, 0.22-micron filtered
- 70%-isopropanol solution in DI water

Preparing the Gel-Dye Solution

Note: *The Dye Concentrate contains DMSO and **must be thawed** completely before use.*

Allow the chip and all reagents to equilibrate to room temperature before use (approximately 20 to 30 minutes).

1. Gently vortex the thawed Dye Concentrate for 10 seconds before use.
2. Transfer **12.5 μ L** of HT DNA Dye Concentrate (blue cap) to the centrifuge tube provided with the reagent kit. Add **1.0 mL** of HT DNA Gel Matrix (red cap) using a Reverse Pipetting Technique.
3. Vortex the solution until it is well mixed and spin down for a few seconds.
4. Transfer the mixture to two spin filters (**500 μ L** each). Discard filters, label and date the tubes
5. Centrifuge at **9200 rcf for 7.5 minutes at RT**. Store in the dark at 4 °C. Use within 3 weeks.

Preparing the DNA Samples and DNA Ladder

Note: *DNA Ladder should be prepared in the same buffer as your DNA samples.*

1. In the provided 0.2 mL Ladder Tube, add **12 μ L** of HT DNA Ladder to **108 μ L** of 1X DNA sample buffer solution. Mix thoroughly by pipetting the solution up and down several times.
2. Insert the Ladder Tube into the ladder slot on the LabChip GX instrument.
3. Recommended sample volumes are **25 μ L** for a 384-well plate or **40 μ L** for a 96-well plate.

Preparing the Buffer Tube

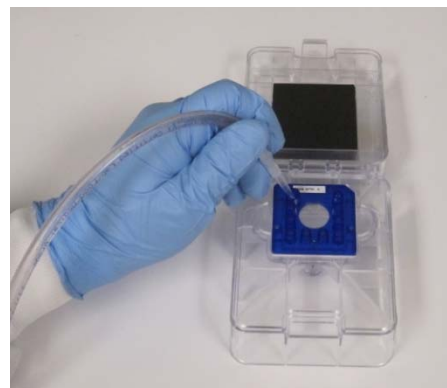
1. Add **750 μ L** of 1X DNA Buffer solution to the 0.75 mL Buffer Tube provided with the reagent kit.
2. Insert the Buffer Tube into the buffer slot on the LabChip GX instrument.

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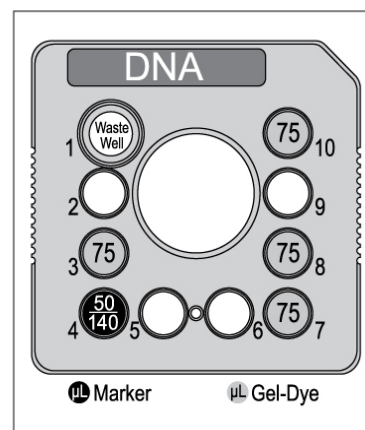
Preparing the DNA Chip

1. Allow the chip to come to room temperature and remove foil cover from chip wells.
2. Use a pipette tip attached to a vacuum line to dry the top and bottom chip surfaces and the top of the chip container. DO NOT run the tip over the central region of the detection window. Return the chip to the chip container when the bottom of the chip and the top of the chip container are dry.
3. Thoroughly aspirate all fluid from the chip wells using a vacuum line with the chip placed in the container and the sipper immersed in fluid.
4. Ensure that each active chip well (1, 3, 4, 7, 8 and 10) is rinsed and completely aspirated twice with molecular biology grade water. Do not allow active wells to remain dry.
5. Add **75 μ L** of Gel-Dye solution to Wells 3, 7, 8 and 10 using a Reverse Pipetting Technique.
6. Add HT DNA Marker (green cap) to chip well 4. Use **50 μ L** for 96-well or **140 μ L** for 384-well plate analysis. Please note that the marker well may need to be replenished if the chip is in idle mode on the instrument for an extended period of time.
7. Make sure the rims of the chip wells are free of adhesive residue.
8. Place the chip in the LabChip GX instrument to begin the assay.



Using a vacuum to aspirate the chip wells is more effective than using a pipette. See page 18 for more details.

Reagent Placement



Add Marker and Gel-Dye according to the image above.

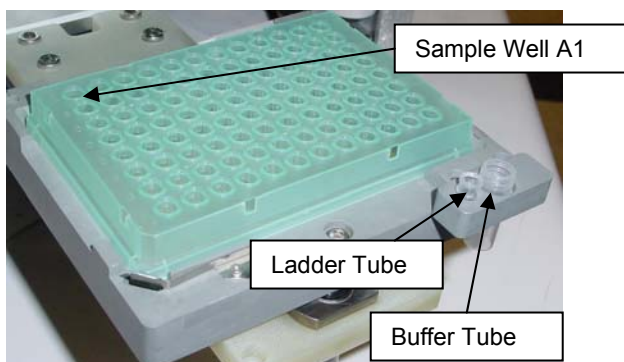
NOTE: Be sure to periodically clean the O-rings on the top plate of the chip interface on the LabChip GX instrument. Use the provided lint free swab dampened with DI water or 70%-isopropanol solution in DI water to clean the O-rings, using a circular motion. Allow the O-rings to dry before inserting a chip.

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Inserting a Chip into the LabChip GX Instrument

1. Check that the sample plate, Buffer Tube, and Ladder Tube are placed appropriately on the instrument.
2. Remove the chip from the chip storage container and inspect the chip window. Clean BOTH sides of the chip window with the Caliper-supplied cleanroom cloth dampened with a 70%-isopropanol solution in DI water.
3. Eject the chip cartridge by pressing the **CHIP** button on the instrument front panel.
4. Release the cartridge latch, insert the chip into the LabChip GX instrument, refasten the latch and push the cartridge into the instrument.
5. Press the **EJECT** button on the instrument front panel to retract the sample plate and send the sipper to the Buffer Tube.



Running the HT DNA Assay

1. Start the LabChip GX software.
2. On the main screen, click on the *Run* button in the upper left corner of the LabChip GX Software.
3. The *Start Run* dialog box will pop up with tabs listed as *Output*, *Run* and *Advanced*.
4. In the *Run Tab*, select the appropriate assay type, operator name, plate name, well pattern and barcode option.
 - For HT DNA assays appropriate assay types are:
 - *HT DNA 1K*: For sizing of DNA fragments in 25 to 1000 base pair range.
 - *HT DNA 5K*: For sizing of DNA fragments in 100 to 5000 base pair range. Fastest analysis time per sample.
 - *HT DNA 12K*: For sizing of DNA fragments in 100 to 12000 base pair range.
 - *HT DNA 12K Extended Time*: To be used only if peaks are cut off using the standard HT DNA 12K script (occurs in some high salt sample buffers).
5. In the *Output Tab* select the destination of the file, the filename convention and any additional data to autoexport.
6. In the *Advanced Tab*, select the number of times each well is sampled, the inclusion of any sample names and any expected peaks.
7. Click *Start* to begin the run.

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Storing the DNA Chip

After use, the chip must be cleaned and stored in the chip container.

1. Remove the reagents from each well of the chip, using vacuum.
2. Each active well (1, 3, 4, 7, 8, and 10) should be rinsed and aspirated twice, using molecular biology grade water.
3. Add **100 μ L** of HT DNA Storage Buffer (white cap) to the active wells.
4. Place the chip in the LabChip GX instrument and click the *Wash* button in the left corner of the LabChip GX Software.
5. Remove the chip from the instrument and place it in the plastic storage container. Add an additional amount of Storage Buffer to well 1. Cover the wells with parafilm to prevent buffer evaporation and store at 4 °C. Storage of a chip with dry wells may cause it to become clogged.

Chip Cartridge Cleaning

1. *Daily*

- A) Inspect the inside of the chip cartridge and O-rings for debris.
- B) Use the provided lint free swab dampened with DI water or 70%-isopropanol solution in DI water to clean the O-rings using a circular motion. If the O-rings stick to the chip or a pressure leak is detected, perform the more extensive monthly cleaning procedure.

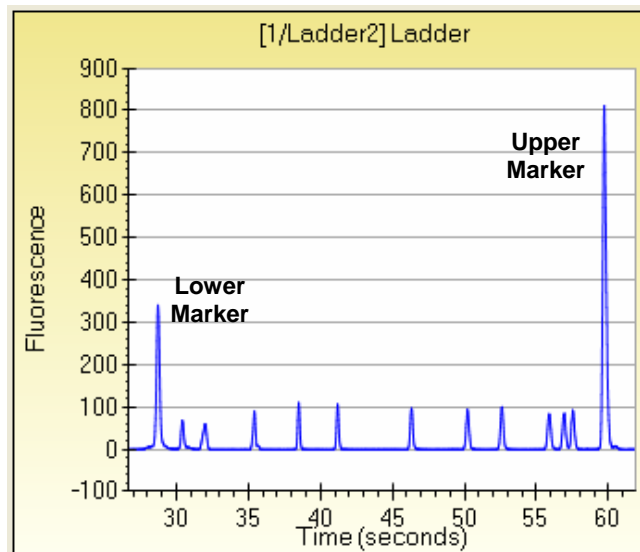
2. *Monthly*

- A) To reduce pressure leaks at the chip interface, clean the O-rings frequently. Remove the O-rings from the top plate of the chip interface on the LabChip GX instrument. Soak O-rings in DI water for a few minutes. Clean the O-ring faces by rubbing between two fingers.
- B) To reduce the occurrence of current leaks, clean the chip interface frequently. Clean the top plate of the chip interface using the provided lint free swab dampened with DI water.
- C) Allow the O-rings and chip interface to air dry. Reinsert the O-rings into the chip cartridge.

Results

HT DNA 1K Ladder Result

- The electropherogram of a typical DNA 1K ladder is shown below. Between the upper and lower markers, peaks in order of increasing migration time correspond to ladder fragments of 25, 50, 100, 150, 200, 300, 400, 500, 700, 850 and 1000 bp.

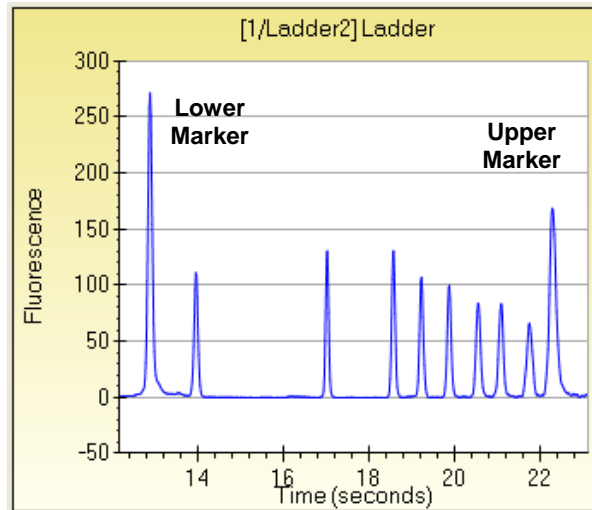


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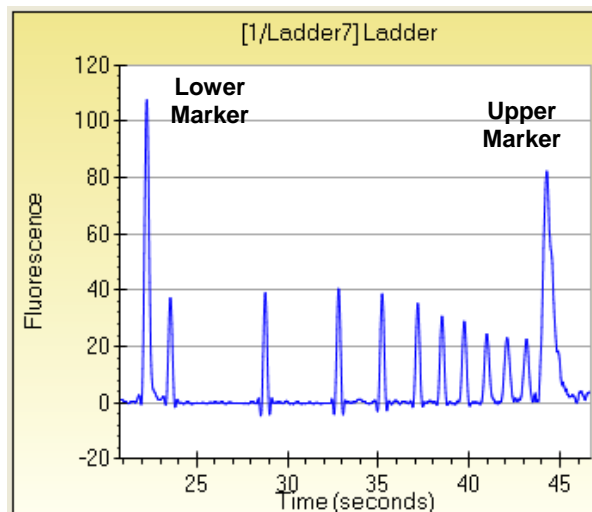
HT DNA 5K Ladder Result

- The electropherogram of a typical DNA 5K ladder is shown below. Between the upper and lower markers, peaks in order of increasing migration time correspond to ladder fragments of 100, 300, 500, 700, 1100, 1900, 2900, and 4900 bp.



HT DNA 12K Ladder Result

- The electropherogram of a typical DNA 12K ladder is shown below. Between the upper and lower markers, peaks in order of increasing migration time correspond to ladder fragments of 100, 300, 500, 700, 1100, 1900, 2900, 4900, 7000 and 10000 bp.



Troubleshooting

- 1. Symptom: No ladder or sample peaks but marker peaks detected. The lower marker peak height will most likely be greater than normal height.**

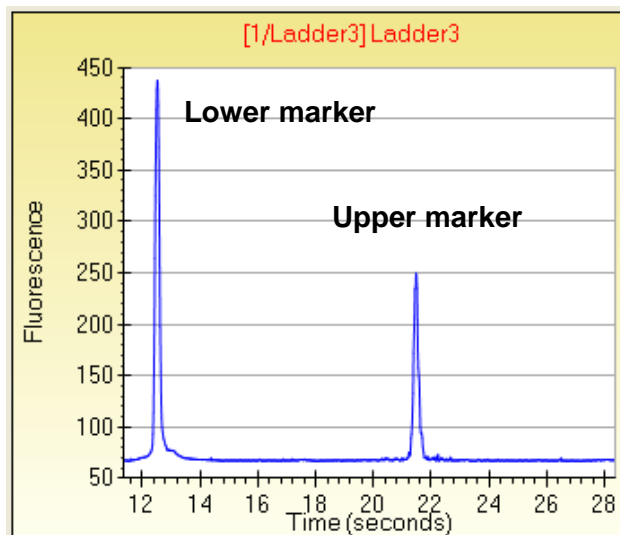
Possible causes:

- A) Air bubble in sipper introduced during chip priming.
- B) A combination of problems described in #2 and #3 (see below).

What to do:

- A) Reprime the chip. See the section entitled “LabChip Kit Essential Practices – Chips” for instructions on how to reprime the chip.

Sample Electropherogram from HT DNA 5K



- 2. Symptom: Ladder detected but no sample peaks**

Possible causes:

- A) The sipper is not reaching the sample due to low sample volume in the well plate.
- B) If the missing sample peaks occurred only in a few wells of the plate, check those wells for air bubbles.
- C) The sipper is not reaching the sample due to an incorrect capillary height setting.
- D) If the plate has been uncovered for some time, sample evaporation might have occurred.

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- E) Debris from the sample or sample prep. is clogging the sipper.

What to do:

- A) Add more sample to the well or dilute sample with 1X TE buffer. Recommended sample volumes are **25 μ L** for a 384-well plate or **40 μ L** for a 96-well plate.
- B) Manually insert a larger volume pipette tip (~100 μ L) into the sample well and dislodge the bubble. Rerun these sample wells.
- C) Re-teach the robot positioning as described in LabChip GX Users Manual.
- D) Check the sample wells, especially around the edge of the plate where evaporation is fastest, and replenish low fluids. Add or dilute samples.
- E) If you suspect there may be debris in your samples, spin the sample plate down in a centrifuge. Unclog the sipper by repriming the chip. See the section entitled “LabChip Kit Essential Practices – Chips” for instructions on how to reprime the chip.

3. Symptom: No ladder peaks but sample peaks and marker peaks are present.

Possible causes:

- A) Low or no ladder volume in Ladder Tube.

What to do:

- A) Add more ladder to the Ladder Tube and restart the run. Recommended minimum ladder volume is **100 μ L**.

4. Symptom: No marker peaks but sample peaks are present.

Possible causes:

- A) No marker added to chip well 4.
- B) If there is marker solution in well 4, the problem may be due to a marker channel clog.

What to do:

- A) This may be due to not filling marker well or chip remaining idle on instrument for extended period of time. Add or replenish the marker solution in the chip using the following procedure:
 - Press the **CHIP** button on the front instrument panel to eject the chip cartridge.
 - Open the chip cartridge and return the chip to the chip container ensuring the sipper is immersed in fluid.
 - Thoroughly aspirate all fluid from chip well four using a vacuum line.
 - Ensure that chip well 4 is rinsed and completely aspirated twice with molecular biology grade water.

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- Add HT DNA Marker (green cap) to chip well 4. Use **50 µL** for 96-well or **140 µL** for 384-well plate analysis. Please note that the marker well may need to be replenished if the chip is in idle mode on the instrument for an extended period of time.
 - Place the chip in the LabChip GX instrument.
 - Reinsert the cartridge by engaging the latch and pushing the cartridge back into the instrument.
 - Press the *Run* button on the main screen of the LabChip GX software.
- B) Perform a marker channel unclogging procedure by repriming the chip. See the section entitled “LabChip Kit Essential Practices – Chips” for instructions on how to reprime the chip.

5. Symptom: Peaks migrating much faster than expected.

NOTE: *Some migration time variance between chips or within a plate is considered normal chip performance. All chips are QC tested at Caliper Life Sciences prior to shipment, and normal migration time windows for the lower and upper markers are listed below:*

*HT DNA 1K assay: Lower Marker (23 to 33 seconds), Upper Marker (41 – 67 seconds)
HT DNA 5K assay: Lower Marker (9 to 12 seconds), Upper Marker (18 – 29 seconds)
HT DNA 12K assay: Lower Marker (19 to 29 seconds), Upper Marker (39 – 55 seconds)*

Possible causes:

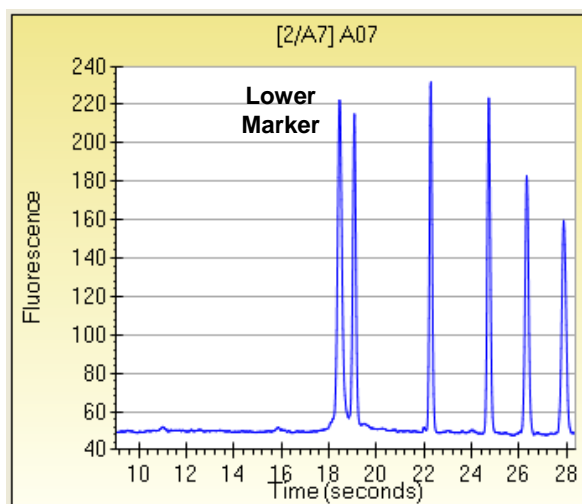
- A) Incorrect Gel-Dye concentration. Migration time is sensitive to dye concentration and peaks will migrate too fast or too slow if the dye concentration in the gel is too low or too high, respectively.

What to do:

- A) Prepare a fresh Gel-Dye solution. Wash and reprime the chip with the new Gel-Dye mixture. See the section entitled “LabChip Kit Essential Practices – Chips” for instructions on how to wash and reprime the chip.
- B) If fast migration is observed repeatedly on a new chip then return the chip to Caliper Life Sciences along with data file for replacement.

6. Symptom: Peaks migrating much later than expected.

The electropherogram of a DNA 5K ladder is shown below where the migration time is much longer than expected.



Possible causes:

- A) Particulates from the samples may be clogging the separation channel.
- B) Excess dye within the separation channel.
- C) Gel-Dye was not primed properly into the chip.
- D) For the HT DNA 12K assay, late peak migration occurs with some high salt sample buffers.

What to do:

- A) Minimize the loading of particulates in the sample by performing a centrifuge spin of the sample plate (e.g. **3000 rcf for 5 mins**) and/or ensuring the *Sip Middle* plate type is selected in the *Start Run* dialog box before starting a new run. The debris maybe flushed out of the chip by washing and re-priming the chip. See the section entitled "LabChip Kit Essential Practices – Chips" for instructions on how to wash and reprime the chip.

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- B) Prepare a fresh Gel-Dye solution. Wash and reprime the chip with the new Gel-Dye mixture. See the section entitled “LabChip Kit Essential Practices – Chips” for instructions on how to wash and reprime the chip.
- C) Check the O-rings on the top surface of the chip interface and clean if necessary.
- D) If the peaks are delayed such that the upper marker peak is cut off, try using the *HT DNA 12K Extended Time* script.

LabChip Kit Essential Practices

To ensure proper assay performance please follow the important handling practices described below. Failure to observe these guidelines may void the LabChip Kit product warranty.¹

NOTE: It is important to keep particulates out of the chip wells, channels and capillary. Many of the following guidelines are designed to keep the chips particulate free.

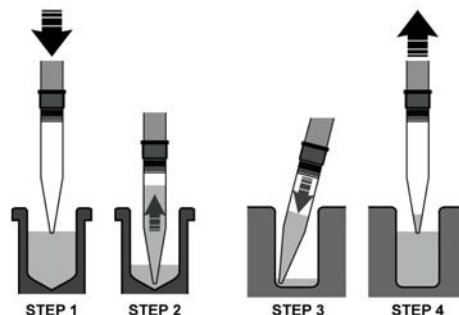
For assay and instrument troubleshooting, refer to the LabChip GX Software Help file or call Caliper Technical Support at 1-877-LABCHIP.

General

- Allow the chip, sample plate and all reagents to equilibrate to room temperature before use (approximately 20 to 30 minutes).
- Clean the O-rings in the chip interface weekly and the electrodes daily. Refer to the Instrument Users Guide Maintenance and Service section for procedures.
- Avoid use of powdered gloves. Use only non-powdered gloves when handling chips, reagents, sample plates, and when cleaning the instrument electrodes and electrode block.
- Calibrate laboratory pipettes regularly to ensure proper reagent dispensing.
- Only the Caliper-supplied clean room cloth can be used on the chip to clean the detection window. Use of other, non-approved wipes may leave fluorescent debris, which can cause erratic focusing.
- Water used for chip preparation procedures must be 0.22-micron filtered deionized, molecular biology grade.
- Use of the “Reverse Pipetting Technique” (described below) will help avoid introducing bubbles into the chip when pipetting gel or other viscous solutions.

Reverse Pipetting Technique

- Step 1. Depress the pipette plunger to the second stop.
- Step 2. Aspirate the selected volume plus an excess amount from the tube.
- Step 3. Dispense the selected volume into the corner of the well by depressing plunger to the first stop.
- Step 4. Withdraw the pipette from the well.



¹ Caliper Life Sciences warrants that the LabChip Kit meets specification at the time of shipment, and is free from defects in material and workmanship. LabChip Kits are warranted for 60 days from the date of shipment. All claims under this warranty must be made within thirty days of the discovery of the defect.

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Reagents

- Store all reagents at 4 °C when not in use.
- The LabChip dye contains DMSO and should be thawed completely before use. It is recommended that you prepare aliquots to reduce the time required for thawing.
- Gently vortex all kit reagents (except for the HT DNA 12K Marker) before use. (Vortexing may shear large DNA fragments in the HT DNA 12K Marker solution. Instead, mix by gently inverting the tube several times.)
- Dispense reagents into chip wells slowly without introducing air bubbles. Insert the pipette tip vertically and to the bottom of the chip well.
- Protect the dye and Gel-Dye mixture from light. Store in the dark at 4 °C when not in use.
- The Gel-Dye mixture expires 3 weeks after preparation.

Chips

- Repriming Chips:
 - Press the **CHIP** button on the front instrument panel to eject the chip cartridge.
 - Reinsert the cartridge by pushing the cartridge back into the instrument.
 - Press the *Run* button on the main screen of the LabChip GX software.
- Washing and Repriming Chips:
 - Press the **CHIP** button on the front instrument panel to eject the chip cartridge.
 - Open the chip cartridge and return the chip to the chip container ensuring the sipper is immersed in fluid.
 - Thoroughly aspirate all fluid from the chip wells using a vacuum line.
 - Ensure that each active well (1, 3, 4, 7, 8 and 10) is rinsed and completely aspirated twice with molecular biology grade water. Do not allow active wells to remain dry.
 - Add **75 µL** of Chip Storage Buffer to each active well (1, 3, 4, 7, 8 and 10).
 - Place the chip in the LabChip GX instrument.
 - Reinsert the cartridge by engaging the latch and pushing the cartridge back into the instrument.
 - Press the *Wash* button on the main screen of the LabChip GX software.

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- After completion of the wash cycle, Press the **CHIP** button on the front instrument panel to eject the chip cartridge.
- Open the chip cartridge and return the chip to the chip container ensuring the sipper is immersed in fluid.
- Thoroughly aspirate all fluid from the chip wells using a vacuum line.
- Ensure that each active well (1, 3, 4, 7, 8 and 10) is rinsed and completely aspirated twice with molecular biology grade water. Do not allow active wells to remain dry.
- Add **75 µL** of Gel-Dye solution to Wells 3, 7, 8 and 10 using a Reverse Pipetting Technique.
- Add HT DNA Marker (green cap) to chip well 4. Use **50 µL** for 96-well or **140 µL** for 384-well plate analysis. Please note that the marker well may need to be replenished if the chip is in idle mode on the instrument for an extended period of time.
- Place the chip in the LabChip GX instrument.
- Reinsert the cartridge by engaging the latch and pushing the cartridge back into the instrument.
- Press the *Run* button on the main screen of the LabChip GX software.
- Other Considerations:
 - DNA chips should be stored refrigerated prior to first use.
 - Cover the active wells on the chip with adhesive foil and store at 4 °C. If using the chip again within 24 hours it may be left at room temperature.
 - Do not allow the liquid in the chip container to freeze, as this may lead to poor chip performance. Do not submerge the chip in any solution.
 - The entire chip surface must be thoroughly dry before use.
 - The sipper must be kept immersed in fluid at all times and should not be exposed to an open environment for long periods of time.
 - Use care in chip handling to prevent sipper damage. Damage to the sipper can result in inconsistent sampling.
 - Avoid exposing the chips to dust by keeping them in a closed environment such as in the chip container or in the instrument before and after chip preparation.
 - Chips can be prepared and left idle on the instrument for up to 8 hours. This workflow allows analysis of samples as needed throughout the day without having to re-prepare the chip as long as the maximum number of samples per chip prep is not exceeded.

Samples

- Prepared sample plates should be free of gas bubbles and particulate debris, both of which may inhibit sipper flow.

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- Sample plates containing gas bubbles and/or particulate debris should be spun down (for example, **3000 rcf for 5 mins at RT**) prior to analysis.
- Recommended sample volumes are **25 μ L** for a 384-well plate or **40 μ L** for a 96-well plate.
- Up to four 96-well plates or one 384-well plate can be run with a single chip preparation.

Chip Well Aspiration Using a Vacuum

Aspirating with a pipette can leave used reagents in the chip wells. For this reason, Caliper recommends vacuuming the wells instead. This can be accomplished by attaching a permanent pipette tip to a house vacuum line with trap (Figures 1a and 1b). To avoid contamination, use a new pipette tip over the permanent tip for each chip aspirated (Figure 2).

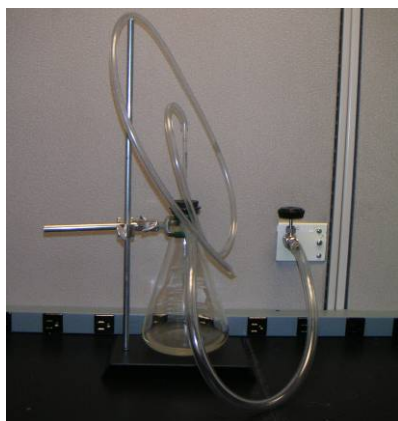


Figure 1a



Figure 1b



Figure 2

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Reordering Information

<u>Product</u>	<u>Part Number</u>
HT DNA 1K/12K LabChip, Version 2	760517
HT DNA 5K/RNA LabChip, Version 2	760435
HT DNA 1K Reagent Kit, ver 2	760526
HT DNA 5K Reagent Kit, ver 2	760566
HT DNA 12K Reagent Kit, ver 2	760569
Buffer Tube	E&K Scientific 697075-NC
Ladder Tube	Genemate C-3258-1
2.0 ml Centrifuge Tubes	Eppendorf 022363352

Customer Technical Support

Caliper Life Sciences
68 Elm Street
Hopkinton, MA 01748-1668
Phone: 1-877-LABCHIP (522-2447)
Fax: 1-508-435-3439

For additional assay and instrument troubleshooting, refer to the LabChip HT Software Help file. Call Caliper Technical Support at 1-877-LABCHIP.

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