DNA 12K Assay Quick Guide
LabChip® GX Touch/GXII Touch

Chip Preparation

1. Allow the chip and reagents to equilibrate to room temperature for at least 30 minutes before use. ***The Dye Concentrate must be completely thawed and vortexed before use.***
2. Prepare Gel-Dye by adding **12.5 µL** DNA Dye Concentrate to **1.0 mL** DNA Gel Matrix using a Reverse Pipetting Technique.
3. Vortex and transfer mixture into two spin filters (approximately **550 µL** per spin filter).
4. Centrifuge at **9200 rcf for 7.5 minutes at room temperature**.
5. Ensure that all of the gel has passed through the filter and then discard the filter**. *Note: Gel-Dye can be stored for up to 3 weeks in the dark at 2-8°C.***
6. Rinse and aspirate each active well (1, 3, 4, 7, 8, and 10) twice with water (Milli-Q® or equivalent).
7. Using a Reverse Pipetting Technique, add gel-dye to chip well 3, 7, 8, and 10 as shown in **Figure 1**.
8. Add DNA Marker to chip well 4 as shown in **Figure 1**. Add **50 µL** DNA Marker for 96-well plates and **120 µL** DNA Marker for 384-well plates or multiple 96-well plate analysis.
9. Clean both sides of the chip window with the supplied clean room cloth dampened with 70% isopropanol. ***Note: Ensure chip well 1 is empty before placing the chip into the LabChip GX Touch/GXII Touch.***

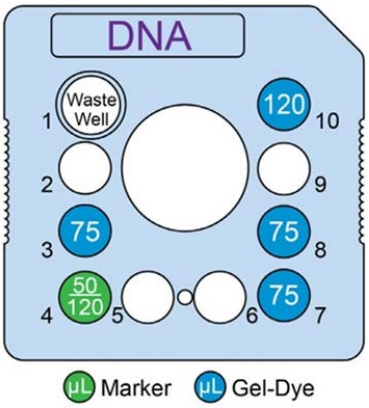
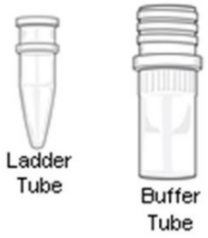


Figure 1.
Reagent Placement

DNA Sample, Ladder and Buffer Preparation



1. In the provided **0.2 mL** Ladder Tube, add **12 µL** DNA Ladder to **108 µL** of your 1X DNA sample buffer. Recommended sample volumes are **25 µL** for a 384-well plate or **40 µL** for a 96-well plate.
2. Add **750 µL** of your 1X DNA sample buffer to the provided Buffer Tube.

*(**Note:** DNA sample buffer solution is the user's DNA buffer such as PCR buffer, etc.)*

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Chip Cleaning and Storage

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

1. Place the chip into the plastic storage container. The sipper should be submerged in the fluid reservoir.
2. Remove the reagents from each well of the chip using a vacuum.
3. Each active well (1, 3, 4, 7, 8, and 10) should be rinse and aspirated twice with water (Milli-Q® or equivalent).
4. Add **100 µL** of DNA Chip Storage Buffer (white cap ○) to the active wells.
5. Place the chip back into the LabChip GX/GXII Touch. Ensure that a Buffer Tube with **750 µL** of water (Milli-Q® or equivalent) is in the buffer slot.
6. Touch the **Wash** button.
7. Remove the chip from the instrument and place it into the storage container.
8. Add an additional **50 µL** of DNA Chip Storage Buffer to well 1.
9. Cover the wells with Parafilm® to prevent evaporation and store at 2-8°C until next use. If using the chip again within 24 hours it may be left at room temperature. Allowing the chip wells to dry may lead to changes in chip performance.

Assay Specifications

The DNA 12K Assay is for use with LabChip GX Touch/GXII Touch instruments. LabChip GX Touch/GXII Touch instruments are for research use only and not for use in diagnostic procedures.

Sizing Range	100 – 12000 bp
Sizing Resolution[i]	± 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
Quantitation Accuracy	±40% or ±1 ng/µL, whichever is greater
Quantitation Precision	20% CV from 100 - 5000 bp 25% CV from 5000 - 1200 bp
Number of Samples per Chip	400 samples (four 96-well plates or one 384-well plate)

[i] 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.

For the complete *DNA 12K Assay User Guide*, go to: http://www.revvity.com/