Genomic DNA Assay Quick Guide
LabChip® GX Touch/GXII

Chip Preparation

1. Allow the chip and reagents to equilibrate to room temperature for 20 minutes before use. **The Dye Concentrate must be completely thawed and vortexed before use.** One vial of Genomic DNA Gel Matrix is good for **4 Small-batch chip preparations (for ≤24 samples) or 2 Large-batch chip preparations (for ≤48 samples)**.
2. Prepare Gel-Dye by adding 13.75 µL DNA Dye Concentrate to 1 vial of Genomic DNA Gel Matrix. Vortex and transfer mixture into **two spin filters** (approximately 550 µL per spin filter). Centrifuge at **9200 rcf for 7.5 minutes at room temperature**. 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 4°C.*)
3. Rinse and aspirate each active well (1, 3, 4, 7, 8 and 10) twice with molecular biology-grade water.
4. Using a Reverse Pipetting Technique, add Gel-Dye to chip well 3, 7, 8 and 10 as shown in Figure 1. For **Small-batch add 50 µL per well**. For **Large-batch add 75 µL in wells 3, 7 and 8 and 120 µL in well 10**.
5. Add Genomic DNA Marker to chip well 4 as shown in Figure 1. For **Small-batch add 60 µL**. For **Large-batch add 120 µL**.
6. Clean both sides of the chip window with the supplied clean room cloth dampened with 70% isopropanol.

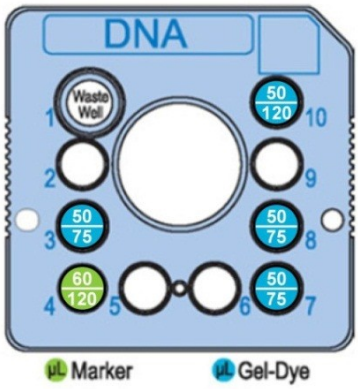

Figure 1. Chip Preparation

(**Note:** The chip can be run with multiple assays, but only one assay type should be run on the chip.)

DNA Sample, Ladder and Buffer Preparation

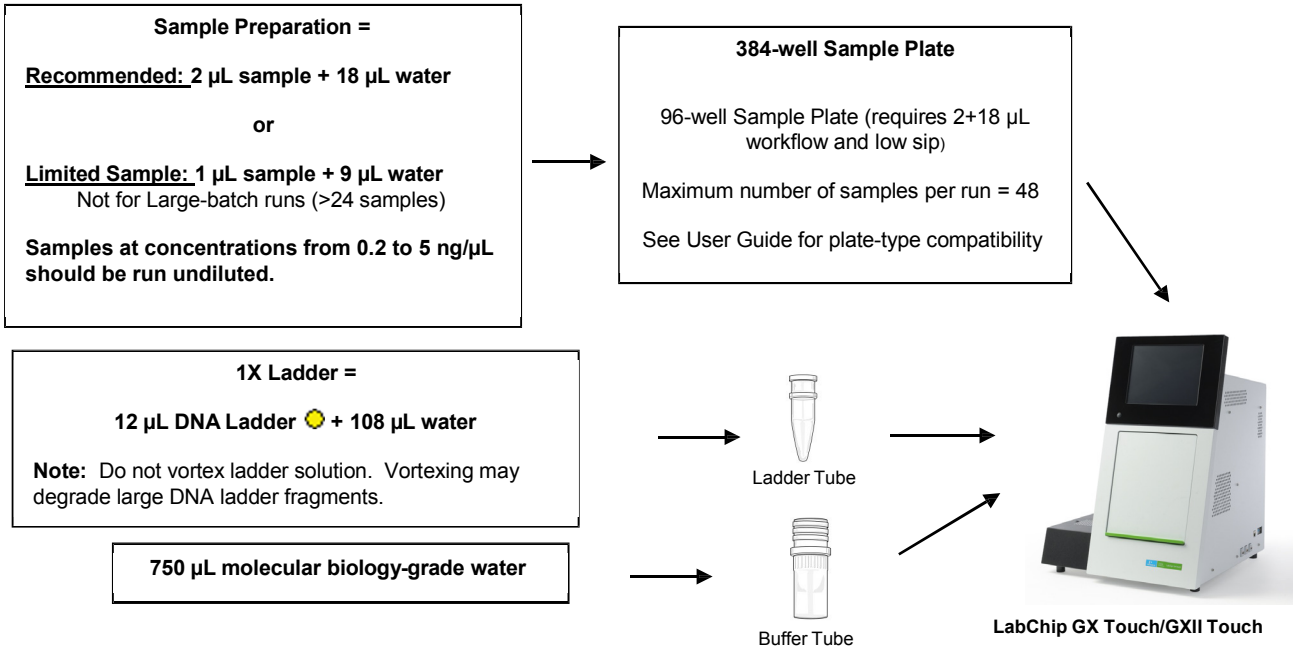

Figure 2. Sample Workflow

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Chip Cleaning and Storage

After use, the chip must be cleaned and stored in the chip container. The cleaning procedure can be conducted the following day, when running overnight.

1. Remove reagents from each well using a vacuum.
2. Rinse and thoroughly aspirate each active well (1, 3, 4, 7, 8 and 10) twice with molecular biology-grade water.
3. Add **100 µL** of Storage Buffer ○ to active wells.
4. Place the chip back on the LabChip GX Touch/GXII Touch. Ensure a Buffer Tube with **750 µL** sample buffer or molecular biology-grade water is in the buffer slot and click the **Wash** button.
5. Remove the chip from the LabChip GX Touch/GXII Touch and place in container.
6. Make sure to cover all wells with Parafilm® and store at 4°C.

Assay Specifications[1]

Sizing Range	50 to 40,000+ bp	
Sizing Accuracy	±20%	Up to 10 kb, based on ladder
Sizing Precision	20% CV	
Quantitation Range	2-50 ng/µL 0.2-5 ng/µL	Sample diluted 10X with water Sample undiluted
Sensitivity	0.1 ng/µL	Sample undiluted; S/N > 3; intact Human Control gDNA
Quantitation Accuracy	±30%	Based on PicoGreen & plate reader quantitation of Human Control gDNA
Quantitation Precision	20% CV	Based on Human Control gDNA
Sample Volume Required	1 µL (diluted) 10 µL (undiluted)	Requires 384-well plate
Samples per Chip Prep	48 or 24	Two workflows: one for ≤24 samples, one for ≤48 samples
Analysis Time	48 samples in 2.5 hrs	Walk-away time
Samples per Chip Reagent Kit	480	
Chip Reagent Kit Stability	3-9 months	
For Research Use Only		

[1] Human Control gDNA from intestine was purchased from BioChain (Hayward, CA).

For complete Genomic DNA Assay User Guide, go to:

http://www.perkinelmer.com/labchipsystems

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