

DNA 12K Assay Quick Guide

LabChip® GX Touch/GXII Touch

Chip Preparation

1. Allow the chip and reagents to equilibrate to room temperature for about 20-30 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. Vortex and transfer mixture to two spin filters. Centrifuge at **9200 rcf for 7.5 minutes at RT**. Ensure that all of the gel has passed through the filter and then discard the filter.
3. Rinse and aspirate each active well (1, 3, 4, 7, 8 and 10) twice with molecular biology grade water.
4. Add prepared Gel-Dye to chip wells 3, 7, 8 and 10 (as shown in Figure 1) using a Reverse Pipetting Technique.
5. 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 plate or multiple 96-well plate analysis.
6. Clean both sides of the chip window with the supplied clean room cloth dampened with 70% isopropanol.

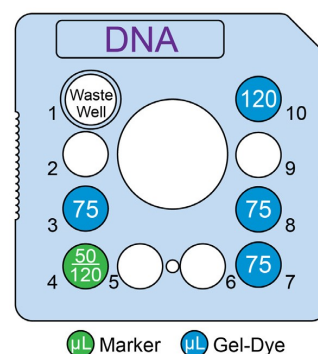
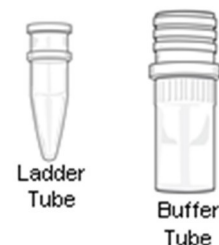


Figure 1. Chip Preparation

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.
2. Recommended sample volumes are **25 µL** for a 384-well plate or **40 µL** for a 96-well plate.
3. 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.



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 Touchz/GXII Touch and place in container.
6. Make sure to cover all wells with Parafilm® and store at 4°C.

DNA 12K Assay Quick Guide

LabChip® GX Touch/GXII Touch

Assay 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
Quantitation Accuracy	± 40% or ± 1 ng/μL, whichever is greater
Quantitation Precision	20% CV from 100 – 5000 bp, 25% CV from 5000 – 12000 bp
Number of Samples per Chip Prep	400 samples (four 96-well plates or one 384-well plate)
For Research Use Only	

- 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 complete DNA 12K Assay User Guide, go to:

<http://www.perkinelmer.com/labchipsystems>