Agilent High Sensitivity DNA Kit for the 2100 Bioanalyzer System

Size, quantify and QC your DNA samples with highest sensitivity

Sizing and quantification of DNA samples in the pg/µL concentration range

Running next generation sequencing (NGS) projects successfully requires optimized sample preparation workflows and well-defined protocols which should be followed strictly. The Agilent High Sensitivity DNA Kit for the Agilent 2100 Bioanalyzer system offers improved sensitivity for checking the size and quantity of precious DNA samples of limited abundance. Whether analyzing highly fragmented starting material, ChIP-derived DNA, or targeted enriched libraries for sequencing, the High Sensitivity DNA kit reliably sizes and quantifies your sample in the lower pg/µL concentration range.

Advantages

- **Increased sensitivity for DNA fragment analysis** – down to 5 pg/µL
- **Sizing, quantification and quality control of fragmented DNA or DNA sequencing libraries** – down to 100 pg/µL
- **Broad linear dynamic range** – enables the detection of less abundant products, for example, PCR artifacts and impurities
- **Easy definition of smear regions** – specify your size range of interest
- **Sizing accuracy** – samples are normalized to two internal markers and an external ladder
- **Quantification accuracy and reproducibility** – automated quantitation of each DNA fragment against internal standards

- **Minimal sample consumption** – only 1 µL of material required per analysis
- **Ready-to-use** – standardized assays and pre-packaged reagent kits
- **Quick and easy sample comparison** – one-click overlay, scaling or zooming features
- **Alternative data display options** – results are displayed as gel-like images, electropherograms, and in tabular formats.

Analytical specifications	High Sensitivity DNA Kit
Sizing range	50–7000 bp
Typical sizing resolution	50–600 bp: ± 10% 600–7000 bp: ± 20%
Sizing accuracy*	± 10%
Sizing reproducibility*	5% CV
Quantification accuracy*	20%
Quantification reproducibility*	50–2000 bp: 15% CV 2000–7000 bp: 10% CV
Quantitative range*	5–500 pg/µL
Maximum salt	10 mM Tris and 1 mM EDTA
Physical specifications	
Analysis run time	45 minutes
Samples per chip	11
Sample volume	1 µL
Kit stability**	4 months
Instrument compatibility	2100 Bioanalyzer types: G2938B, G2938C, G2939A, G2939B

* Determined analyzing the DNA ladder as sample
** Minimum guarantee

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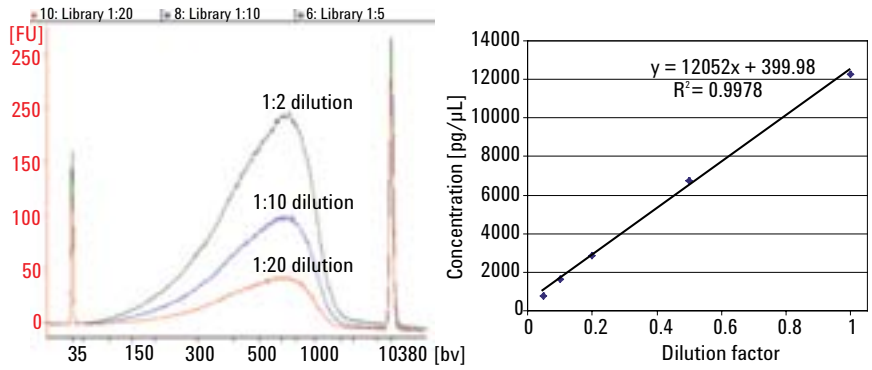
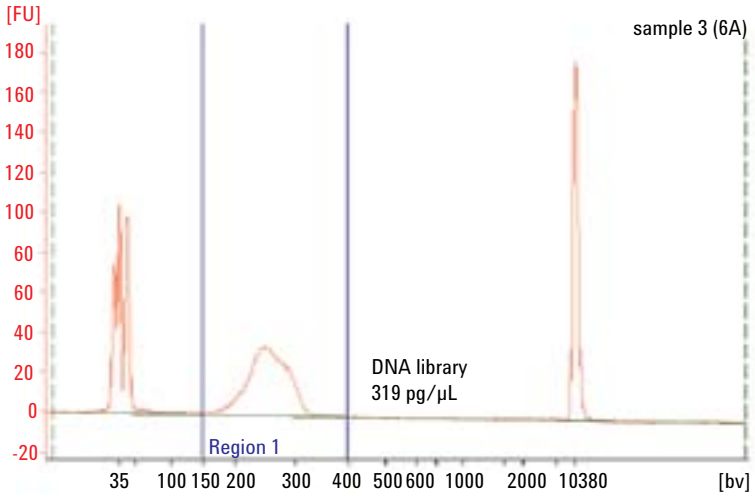
High analytical detection sensitivity for NGS sample prep workflows



Electropherogram overlay of a dilution series of fragmented dsDNA. High quantitation accuracy for fragmented or sheared DNA can be achieved in a concentration range of 100 – 10000 pg/µL.

High sensitivity sizing and quantitation of fragmented DNA

It's imperative to establish a reproducible and reliable next generation sequencing sample preparation workflow, which relies on the quantitation and size determination of fragmented DNA of limited abundance. Whether analyzing DNA material derived from ChIP or fragmented DNA from precious patient samples, the High Sensitivity DNA Kit allows sizing and quantifying of sheared dsDNA starting material down to a concentration of 100 pg/µL.



Sizing and quantification of an Illumina GAII library enriched with Agilent's SureSelect Target Enrichment platform and amplified with only 6 PCR cycles.

Improving next generation sequencing sample preparation workflow

Sequencing sample preparation protocols require DNA library amplification by PCR which can introduce amplification bias. With the High Sensitivity DNA kit, DNA libraries derived from just a few amplification cycles can now be easily analyzed, reducing amplification bias and improving the quality of sequencing data.

Features:

- Monitor purity and size range of DNA libraries
- Quantify low abundant DNA libraries amplified with reduced PCR cycle numbers
- Limit PCR bias by reducing DNA library amplification cycles

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