

Ultra Sensitivity NGS Kit Agilent Femto Pulse System

Femtogram-level sensitivity for unparalleled DNA analysis

Using the Agilent Ultra Sensitivity NGS kit on the unique Agilent Femto Pulse system, researchers can quantify and qualify DNA smears and fragments at extremely low concentrations. Together, these solutions are ideal for the analysis of next-generation sequencing (NGS) libraries, PCR-free genomic DNA (gDNA) library preparation, short-read library quality control (QC), and cell-free DNA (cfDNA) analysis.

Features and benefits

- **Enhanced detection**
Ability to visualize DNA smears down to 5 pg/ μ L, enabling sample conservation for downstream NGS library sequencing.
- **Sizing accuracy**
Reliable sizing from 100 to 6000 bp, making the kit ideal for applications such as short-read NGS library QC, PCR-free library preparation, and cfDNA.
- **Reliable quantification**
Visualize small RNA in a total RNA sample, including the concentration and percentage of miRNA.

Ordering Information

Kit	Part no.
Agilent Ultra Sensitivity NGS kit, 275 samples	FP-1101-0275



Efficient and accurate quantification and sizing of DNA fragments and smears at low concentrations is important for the reduction of PCR amplification bias, NGS sample QC, and many other applications. The Ultra Sensitivity NGS kit meets these requirements with accurate sizing from 100 to 6,000 bp and reliable quantification of DNA smears and fragments across a dynamic range. Easily detect DNA smears as low as 5 pg/μL (Figure 1A) and quantify up to 250 pg/μL. The enhanced sensitivity of the system allows for the detection of DNA fragments as low as 50 fg/μL (Figure 1B) and an expansive quantification range covering up to 5 pg/μL.

Analysis of electrophoresis results is simplified in the easy-to-use interface of the Agilent ProSize data analysis software. Results are displayed in a digital format as a gel image and in electropherogram traces. The software automatically calculates size, concentration, and molarity of the DNA smear and provides users with a smear analysis function to simplify the average size and molarity calculations of DNA smears.

Specifications

	Ultra Sensitivity NGS kit
Kit Size	275 samples
Sizing Range	100 to 6,000 bp
Sizing Precision	2% CV
Sizing Accuracy	± 5% or better
Fragment Detection Range ¹ (S/N>5)	0.05 to 5pg/μL
Smear Detection Range ² (S/N>5)	5 to 250 pg/μL input DNA
Fragment Quantitation Range ¹ (S/N>10)	0.1 to 5 pg/μL
Smear Quantitation Range ² (S/N>10)	25 to 250 pg/μL
Quantification Accuracy ^{1,2}	± 25%
Quantification Precision ^{1,2}	15% CV
Maximum DNA Concentration	5 pg/μL per DNA fragment; 250 pg/μL total

¹ Results using DNA Fragment standards initially prepared in 0.25x TE buffer.

² Results using NGS Library sample with smear range from 150 bp to 1,200 bp in 0.25x TE.

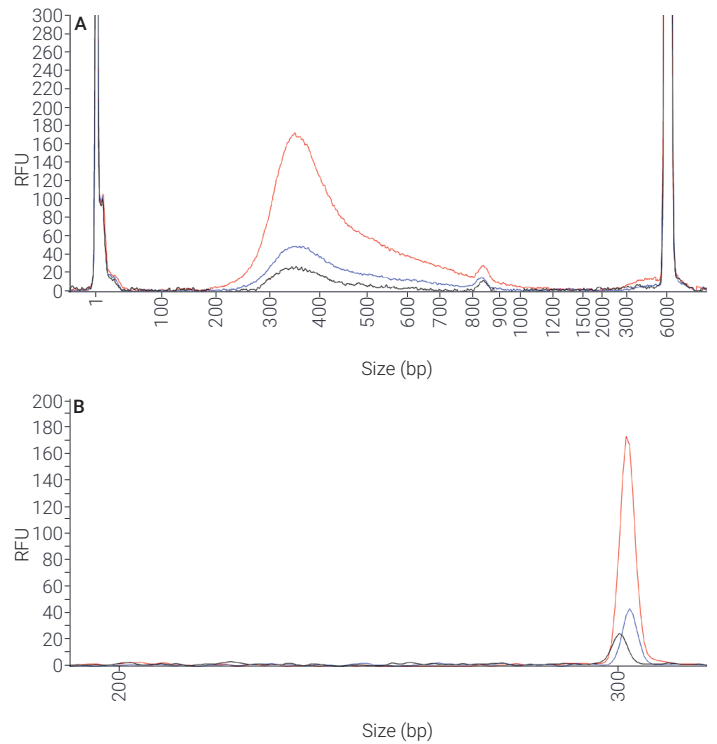


Figure 1. Analysis of DNA smears and fragments at extremely low concentrations. A) An overlay of an NGS library preparation at 5 pg/μL (black trace), 10 pg/μL (blue trace), and 25 pg/μL (red trace). B) An overlay of a 300 bp DNA fragment at 50 fg/μL (black trace), 130 fg/μL (blue trace), and 500 fg/μL (red trace).

Learn more about the [Ultra Sensitivity NGS kit](#) for the Femto Pulse system.

Buy online: [agilent.com/chem/store](https://www.agilent.com/chem/store)

For Research Use Only. Not for use in diagnostic procedures.
PR7000-8825

This information is subject to change without notice.