

# Large Fragment 50 kb Analysis Agilent Fragment Analyzer Systems

## Assessment of large DNA fragment size, quality, and quantity



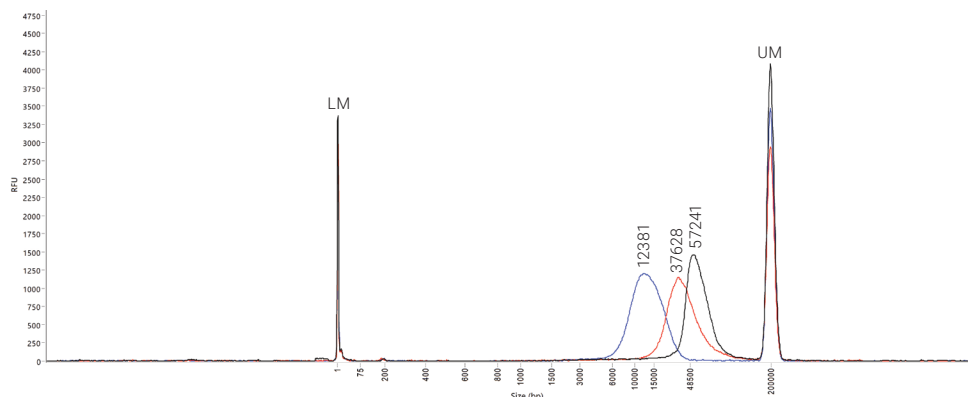
Quality assessment of large DNA fragments and smears is essential in various downstream applications such as long-read next-generation sequencing (NGS). The long-read sequencing workflow can have several quality assurance steps, including starting DNA material, sheared DNA pre-library formation, and the final long-read NGS library. The Agilent Fragment Analyzer systems are recommended for sizing and quantification, and greatly decreases the time and sample input required for routine quality control steps. With the Agilent HS Large Fragment 50 kb kit, users can achieve accurate and reliable quality assessment and sizing of DNA through 50 kb.

## Features and benefits

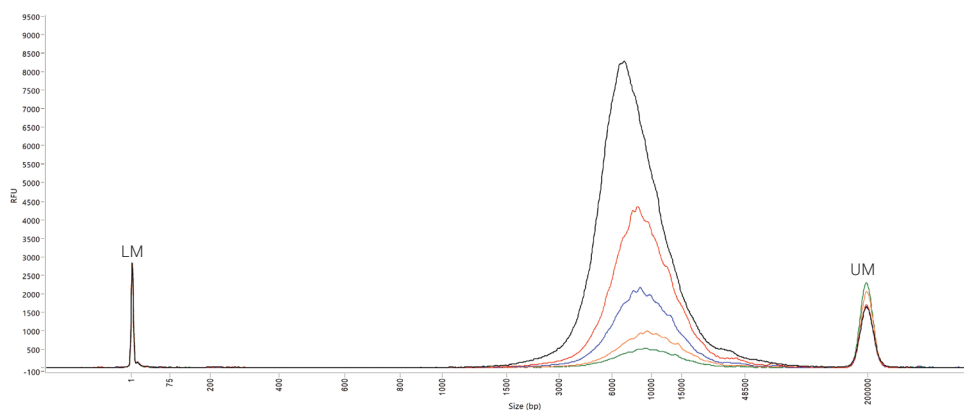
- **Simple and convenient sample handling**  
Requires only 2  $\mu\text{L}$  of sample for analysis, with a broad input concentration range of 5 to 600  $\text{pg}/\mu\text{L}$  for DNA fragments or 50  $\text{pg}/\mu\text{L}$  to 5  $\text{ng}/\mu\text{L}$  for DNA smears.
- **Large sizing range**  
Accurately size DNA fragments and smears from 75 bp to 50 kb.
- **Short run times**  
Complete analysis in approximately one hour (using a short capillary array).

## Ordering information

Kit	Part no.
Agilent HS Large Fragment 50 kb kit, 500 samples	DNF-464-0500



**Figure 1.** Electropherogram overlay of large DNA sample sheared to different sizes and analyzed on the Agilent Fragment Analyzer system using the Agilent HS Large Fragment 50 kb kit. LM = Lower Marker and UM = Upper Marker.



**Figure 2.** Electropherogram overlay of sheared 10 kb DNA smears at different concentrations. gDNA was sheared to a size of approximately 10 kb. Serial dilutions of this sample starting from 5 ng/μL (black trace) were prepared and analyzed on the Agilent Fragment Analyzer system, using the Agilent HS Large Fragment 50 kb kit. The overlay highlights the dynamic concentration range of the kit. LM = Lower Marker and UM = Upper Marker.

## Specifications

	HS Large Fragment 50 kb kit <sup>1</sup>
Kit Size	500 samples
Sizing Range	75 to 48,500 bp
Quantification Accuracy <sup>2</sup>	± 15% or better
Fragment Sensitivity <sup>2</sup>	5 to 600 pg/μL input DNA (optimal concentration 500 to 600 pg/μL)
Smear Sensitivity Range <sup>2</sup>	50 pg/μL to 5 ng/μL input DNA (optimal concentration 1 ng/μL)
Quantification Accuracy <sup>2</sup>	± 25%
Quantification Precision <sup>2</sup>	20% CV
Maximum Concentration	600 pg/μL per fragment; 5 ng/μL per total sample

<sup>1</sup> Specifications not applicable to 55 cm long arrays.

<sup>2</sup> Results using DNA Fragment standards at 600 pg/μL and DNA smears at 1 ng/μL prepared in 1x TE buffer.

Learn more about the [HS Large Fragment 50 kb kit](#) for the Fragment Analyzer systems.

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

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PR7001-0141

This information is subject to change without notice.