

Errata Notice

This document contains references to "Advanced Analytical" or "AATI." Please note that Advanced Analytical was purchased by Agilent in June 2018. For more information, contact Agilent via: www.agilent.com/chem/contactus

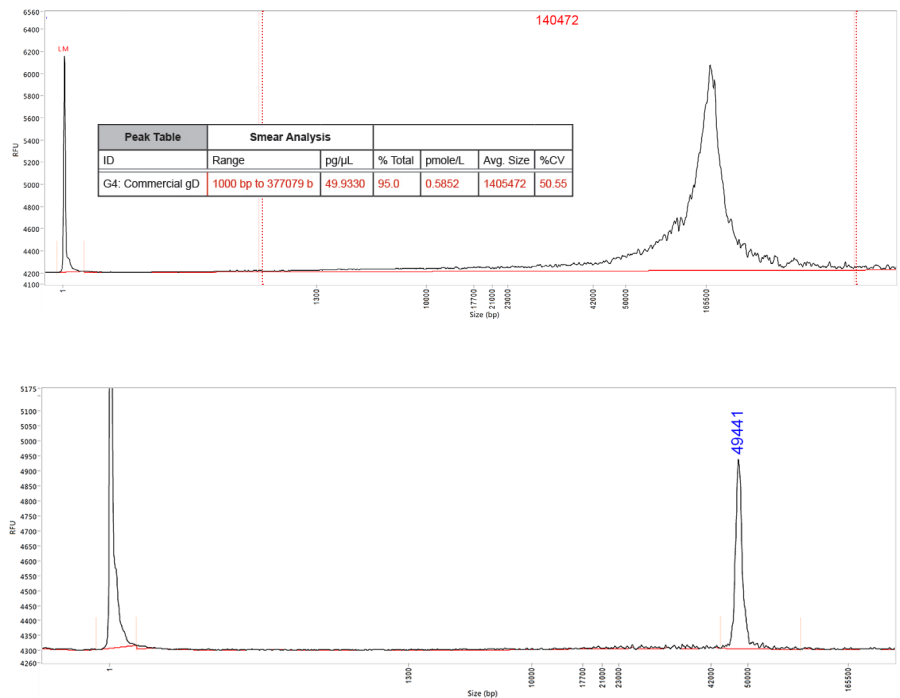


gDNA 165 Kb Analysis Kit

FEMTO Pulse Automated Pulsed-Field CE Instrument

Quantify and Qualify gDNA Smears and DNA Fragments Through 165 Kb

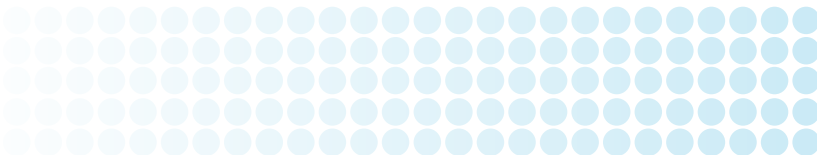
Analysis of genomic DNA smears and large DNA fragments is of growing importance to researchers as genomic and molecular biology techniques advance, from long-read next-generation sequencing to the synthesis of large genetic elements. The **FP-1002 gDNA 165 Kb Analysis Kit** for the FEMTO Pulse eliminates the need for agarose-based pulsed-field gel electrophoresis (PFGE); gDNA smears and large DNA fragments through 165 Kb can be separated in approximately 1 hour, accelerating life sciences research.



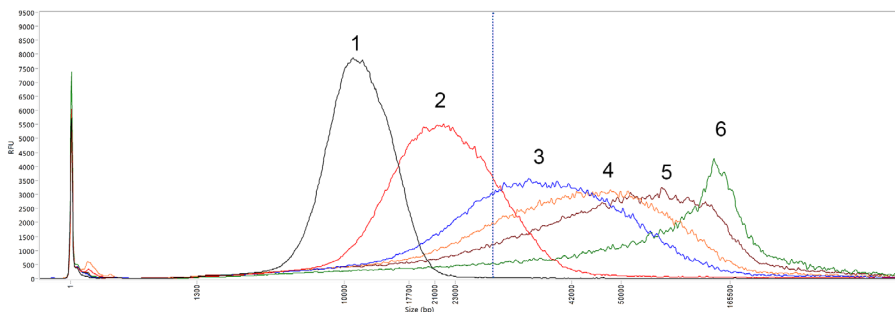
Eliminate overnight PFGE separations and start sequencing your PacBio libraries sooner.



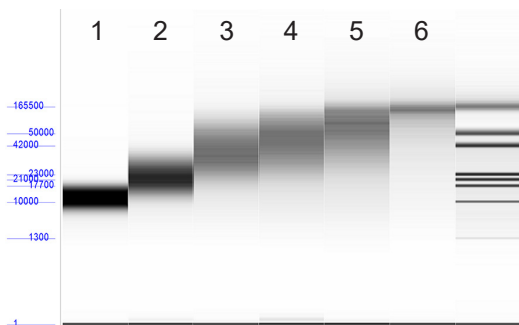
The figure above depicts the separation of commercially purchased gDNA (top) and the separation of a lambda phage genome (bottom). Pulsed-field capillary electrophoresis was performed with the FEMTO Pulse Automated Pulsed-Field CE Instrument with the FP-1002 gDNA 165 Kb Analysis Kit under standard conditions. Post-separation analysis was performed in PROSize Data Analysis Software. The Smear Analysis function is used to analyze a specific region of the electropherogram, providing sizing and quantification data. In the top electropherogram the Smear Analysis region is indicated by the red lines.



PROSize Data Analysis Software streamlines the quality analysis of gDNA smears with the Genomic Quality Number (GQN). User-defined, the GQN is a dynamic quality metric that allows researchers to objectively assess the quality of gDNA. The GQN is calculated based on a Size Threshold, defined by the researcher. The GQN is reported as a value between 0 and 10, with higher values corresponding with more of the gDNA sample falling above the Size Threshold.



This figure depicts an overlay of large DNA smears as an electropherogram (top left) and a digital gel image (bottom left). A Size Threshold was defined at 30,000 bp (blue line on the electropherogram). The relationship between the Size Threshold and smear size is shown in the table (bottom right), as more of the sample exceeds the threshold, the higher the measured GQN.



Sample	Measured Size (bp)	GQN
1	11,038	0.0
2	21,819	1.5
3	35,016	6.4
4	48,281	7.1
5	93,068	7.8
6	149,350	8.2

Features and Benefits

- Extended Sizing Range**
 Efficiently and accurately size gDNA smears and large DNA fragments through 165 Kb.
- Superior Resolution**
 Easily resolve large fragment smears through the dynamic range of the kit.
- Enhanced Sensitivity**
 Conserve precious sample with unparalleled DNA detection sensitivity.
- Accurate Quantification**
 Visualize and measure low concentration samples with up to 20x more sensitivity.

Specifications

- DNA Sizing Range**
 1.3 Kb – 165 Kb
- DNA Fragment Concentration Range**
 300 fg/μL – 30 pg/μL
- DNA Smear Concentration Range**
 5 pg/μL – 500 pg/μL

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For Research Use Only. Not for use in diagnostic procedures.

This information is subject to change without notice.