

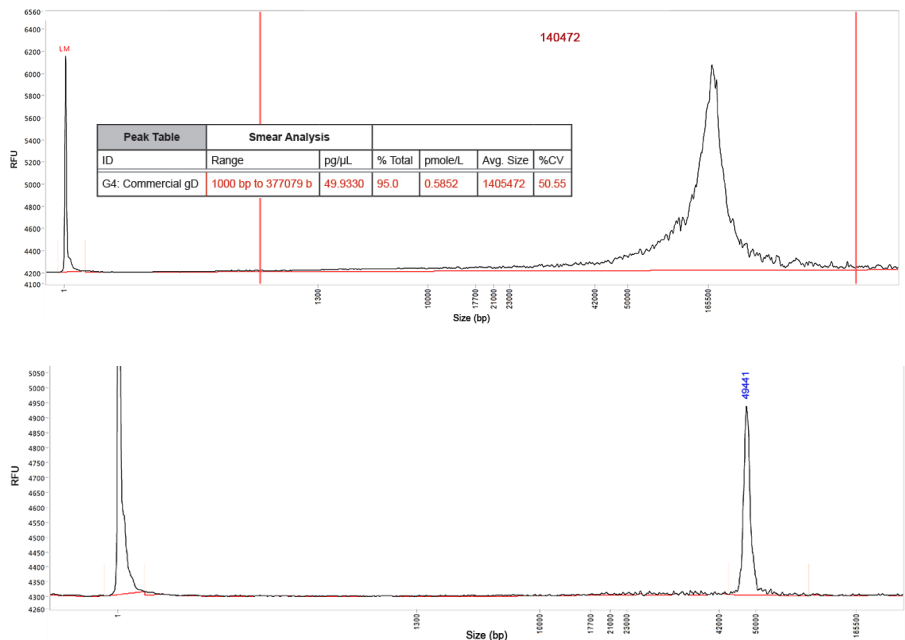
# gDNA 165 Kb Analysis Kit

FEMTO *Pulse*™ Automated Pulsed-Field CE Instrument

## Quantify and qualify gDNA smears and DNA fragments through 165 Kb

Analysis of gDNA 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*™ Automated Pulsed-Field CE Instrument** eliminates the need for agarose-based pulsed-field gel electrophoresis (PFGE), separating gDNA smears and large DNA fragments through 165 Kb in approximately 1 hour, accelerating life sciences research.

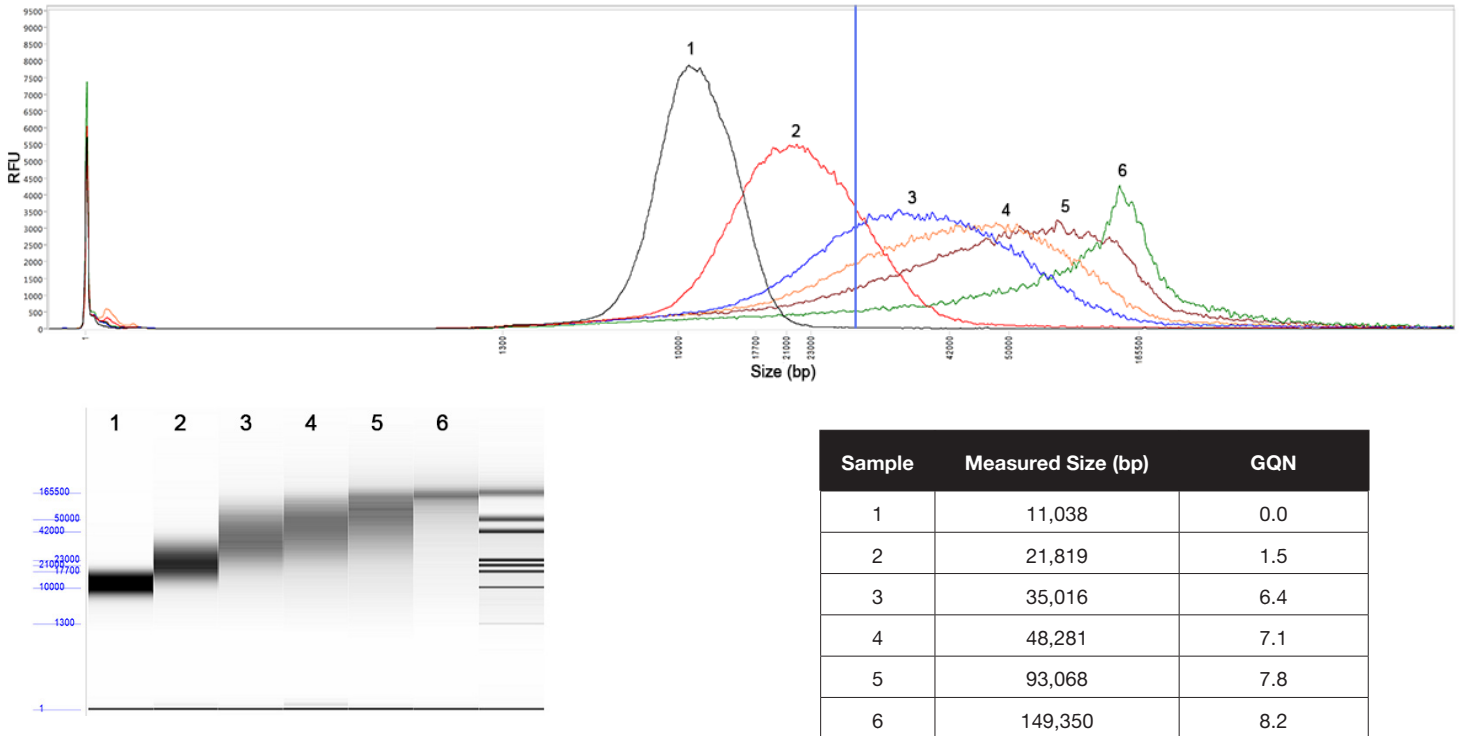
Start sequencing your PacBio® libraries up to 5 days sooner and eliminate all overnight PFGE



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. A size threshold is selected 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.



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

Features and Benefits		Specifications	Descriptions
<p><b>Extended Sizing Range</b> Efficiently and accurately size gDNA smears and large DNA fragments through 165 Kb</p>	<p><b>Enhanced Sensitivity</b> Conserve precious sample with unparalleled DNA detection sensitivity</p>	DNA Sizing Range	1.3 Kb – 165 Kb
<p><b>Superior Resolution</b> Easily resolve large fragment smears through the dynamic range of the kit</p>	<p><b>Accurate Quantification</b> Visualize and measure low concentration samples with up to 20x more sensitivity</p>	DNA Fragment Concentration Range	300 fg/μL – 30 pg/μL
		DNA Smear Concentration Range	5 pg/μL – 500 pg/μL

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