

Agilent D1000 ScreenTape and High Sensitivity D1000 ScreenTape

Accelerate DNA analysis with the Agilent 4200 TapeStation system

Data Sheet

Fast and easy DNA quality control

The Agilent 4200 TapeStation system offers automated sample processing of 1 to 96 samples for quick and reliable RNA and DNA sample quality control.

The D1000 ScreenTape has been developed for the separation and analysis of DNA fragments from 35 bp to 1,000 bp. Depending on the sensitivity requirements, it is possible to choose between the D1000 ScreenTape and the High Sensitivity D1000 ScreenTape application.

DNA sample quality control has never been so easy – simply load the 4200 TapeStation with the appropriate D1000 ScreenTape device, loading tips, and samples in tube strips or 96-well plates, and you will be reviewing results in less than 1 minute per sample.

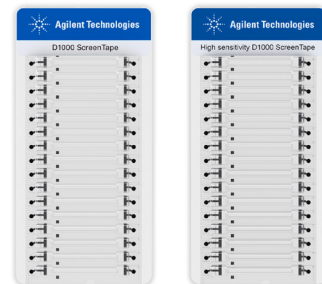
Key Features

Excellent accuracy and precision

Reliably analyze size and quantity of PCR fragments, fragmented DNA, and DNA libraries.

High sensitivity

Qualify your precious DNA sample down to a concentration of 5 pg/ μ L per fragment.



Easy to use

Simplify your sample quality control with ready-to-use ScreenTape consumables and reagents.

Scalable throughput

Analyze any number of samples at constant price per sample.

Fast results

Obtain results in as little as one minute per sample independent of total sample number.

Zero carryover

Avoid sample carry over by running each DNA sample in a separate lane of the ScreenTape device.

Minimal sample consumption

Use not more than 2 μ L of your precious samples per run – even for high sensitivity analysis.

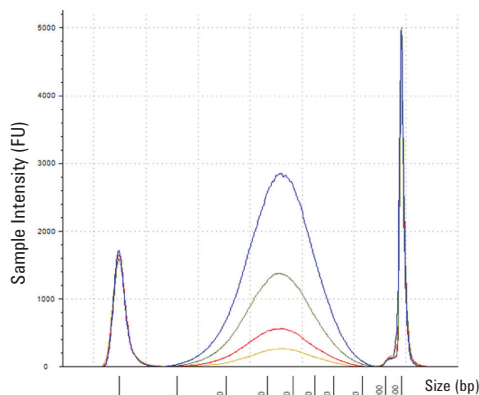
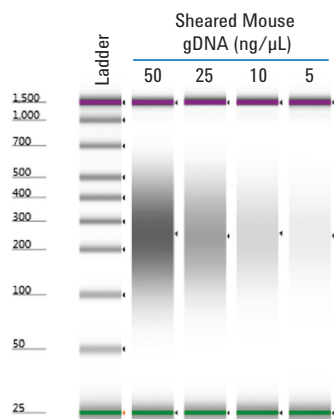
Complete solution for DNA analysis

- Agilent 4200 TapeStation system (G2991AA)
- Agilent D1000 ScreenTape Assay
 - * D1000 ScreenTape (5067-5582)
 - * D1000 Reagents (5067-5583)
 - * Optional: D1000 Ladder (5067-5586) and D1000 Sample Buffer (5067-5602)
- Agilent High Sensitivity D1000 ScreenTape Assay
 - * High Sensitivity D1000 ScreenTape (5067-5584)
 - * High Sensitivity D1000 Reagents (5067-5585)
 - * Optional: High Sensitivity D1000 Ladder (5067-5587) and High Sensitivity Sample Buffer (5067-5603)



Agilent Technologies

Agilent D1000 ScreenTape applications



Analytical specifications	Agilent D1000 ScreenTape	Agilent High Sensitivity D1000 ScreenTape
Sizing range	35 – 1,000 bp	35 – 1,000 bp
Typical resolution	35 – 300 bp: 15% 300 – 1,000 bp: 10%	35 – 300 bp: 15% 300 – 1,000 bp: 10%
Sensitivity ¹	0.1 ng/μL	5 pg/μL
Sizing precision ²	5% CV	5% CV
Sizing accuracy ^{2,3}	± 10%	± 10%
Quantification precision	0.1 – 1 ng/μL: 15% CV 1 – 50 ng/μL: 10% CV	15% CV
Quantitative accuracy ⁴	± 20%	± 20%
Quantitative range	0.1 – 50 ng/μL	10 – 1,000 pg/μL
Maximum sample buffer strength	240 mM NaCl 60 mM Phosphate Buffer 60 mM Guanidine-HCl 60 mM Acetate 20 mM KCl	80 mM NaCl 20 mM Phosphate Buffer 20 mM Guanidine-HCl 20 mM Acetate 7 mM KCl

¹ Signal/noise ratio > 3 for a single peak

² Determined using D1000/High Sensitivity D1000 ladder as sample

³ Accuracy for electronic ladder: ± 20%

⁴ Measured against 2200 TapeStation system

Physical specifications	Agilent D1000 ScreenTape	Agilent High Sensitivity D1000 ScreenTape
Analysis time	16 samples < 20 minutes 96 samples < 90 minutes	16 samples < 20 minutes 96 samples < 105 minutes
Samples per consumable	16	16
Sample volume required	1 μL	2 μL
Kit stability	4 months	4 months
Kit size	112 samples	112 samples

DNA analysis during the NGS workflow

The Agilent 4200 TapeStation system can be used at several steps of the Next Generation Sequencing (NGS) workflow such as the shearing of genomic DNA (gDNA) and the library amplification, to ensure sample quality. The figure shows the analysis of a sheared gDNA sample of the SureSelect target enrichment workflow with the D1000 ScreenTape assay.

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