# Agilent Genomic DNA ScreenTape

Accelerate genomic DNA quality control with the Agilent 4200 TapeStation system

## Data Sheet

### Confidence in genomic DNA quantity and quality

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 Agilent Genomic DNA ScreenTape assay has been developed for the separation and analysis of DNA samples up to > 60,000 base pairs. It provides accurate quantification data and allows a quality assessment of genomic DNA material. The DNA Integrity Number (DIN) provides a numeric measurement for the genomic DNA integrity which is ideal for next generation sequencing (NGS) and array comparative genomic hybridization (aCGH) workflows.

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

### Key Features

#### Excellent accuracy and precision

Reliably analyze genomic DNA concentration and size.


#### Automated integrity assessment

Rely on the digital assessment of genomic DNA integrity by using the DNA Integrity Number (DIN).

#### Easy to use

Simplify your genomic DNA 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 less than two minutes per sample independent of total sample number.

#### Zero carryover

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

#### Minimal sample consumption

Use no more than 1 µL of your precious samples per run.

### Complete solution for genomic DNA analysis

- Agilent 4200 TapeStation system (G2991AA)
- Agilent Genomic DNA ScreenTape (5067-5365)
- Agilent Genomic DNA Reagents (5067-5366)

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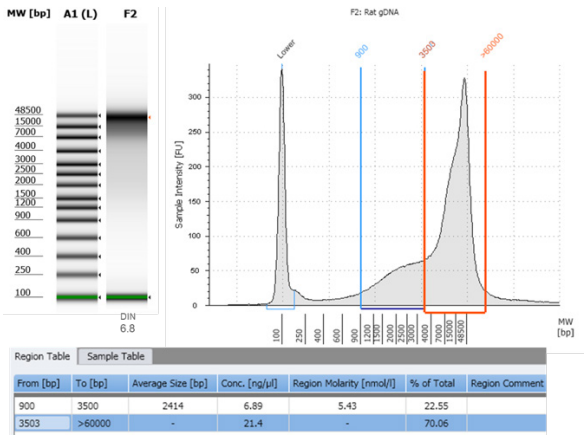
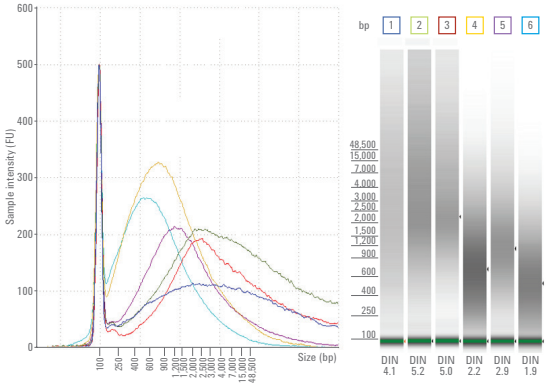
## Agilent Genomic DNA ScreenTape applications




### Integrity assessment of genomic DNA

Determining the quantity and quality of the genomic DNA starting material is crucial for the success of down stream experiments, as Next Generation Sequencing (NGS). Quality of genomic DNA can be easily analyzed with the Genomic DNA ScreenTape assay, which provides DNA integrity, size and concentration information.

The upper figure shows the analysis of Genomic DNA isolated from rat blood analyzed with the Genomic DNA ScreenTape assay. The DNA Integrity Number (DIN) is presented below the gel image, giving a non-subjective measure of DNA integrity. In addition, regions can be defined with the software to determine average size and concentration within each of those regions.




The bottom figure shows the quality assessment of genomic DNA from FFPE tissues performed by using the Genomic DNA ScreenTape assay. The gel images of different samples with the respective DIN and an overlay of the corresponding electropherograms are shown. Genomic DNA from FFPE material is in general of low integrity but can still be used for specific workflows.

| Analytical specifications | Agilent Genomic DNA ScreenTape |
|---|---|
| Sizing range | 200 to > 60,000 bp |
| Sensitivity[1] | 0.5 ng/µL |
| Sizing precision[2] | 200 – 15,000 bp: 15% CV |
| Sizing accuracy[2] | 200 – 15,000 bp: ± 15% |
| Quantitative precision[3] | 15% CV |
| Quantitative accuracy[3,4] | ± 20% |
| Quantitative range | 10 – 100 ng/µL |
| DIN functional range[5] | 5 – 300 ng/µL |
| Maximal sample buffer strength | 50 mM NaCl, 50 mM Acetate, 10 mM $MgCl_2$, 1 µg/µL Glycogen, 10% EtOH, 10% 2 - Prop |

[1] Signal/noise ratio >3 for a single peak
[2] Determined using genomic DNA ladder as sample
[3] Average result from various genomic DNA samples
[4] Measured against 2200 TapeStation
[5] DIN – DNA integrity number

| Physical specifications | Agilent Genomic DNA ScreenTape |
|---|---|
| Analysis time | 16 samples < 25 minutes<br>96 samples < 140 minutes |
| Samples per device | 15 |
| Sample volume required | 1 µL |
| Kit stability | 4 months |
| Kit size | 105 samples |

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