



Agilent 4200 TapeStation System

COMPLETE SUCCESS BEGINS WITH SAMPLE QUALITY CONTROL

The Measure of Confidence



COMPLETE SUCCESS BEGINS WITH SAMPLE QUALITY CONTROL

The Agilent 4200 TapeStation system offers automated sample processing and scalable throughput. With the ready-to-use ScreenTape technology it is a fast and flexible solution for true end-to-end sample quality control (QC) for the full range of sizing applications for DNA and RNA. And with sensitive detection and zero carryover, you get the utmost confidence in your results, ensuring your downstream workflow is a complete success.



A complete solution for your sample QC

- Easy-to-install Agilent 4200 TapeStation instrument
- Laptop with pre-installed Agilent 4200 TapeStation software
- Accessories and consumables for all your QC applications
- User information package with Quick Guides and User Guide USB flash drive



Excellent reproducibility
Achieve user-independent results through minimal manual intervention

Scalable

Analyze any sample number from 1 up to 96 samples at constant cost per sample

Protect sample performance

Avoid sample evaporation by covering your microtiter plates with foil

Flexible

Ready-to-use ScreenTape consumables enable switching between assays in no time.

Small footprint

Save valuable bench space in your laboratory with a compact system offering the complete sample QC solution

Automated

Walk-away operation with fully automated sample processing

Fast

Reliable results within 1-2 minutes for a single sample, or less than 90 minutes for 96 samples

Low sample needed

Requires only 1-2 μ L of your precious sample per run

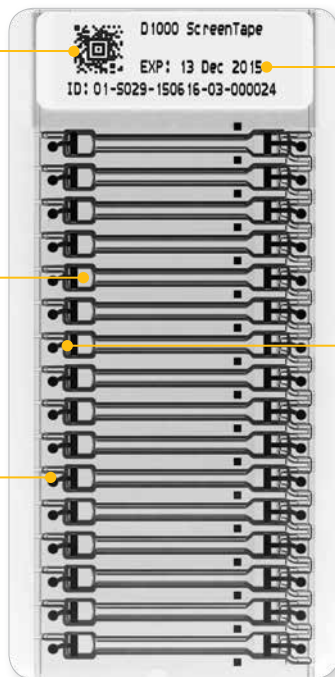
COMPLETE SCREENTAPE PORTFOLIO

The credit card-sized, disposable ready-to-use ScreenTape device carries multiple lanes for separating DNA and RNA samples. Each ScreenTape has 16 lanes so that each sample is analyzed in an individual lane without any risk for cross contamination. Partially-used ScreenTape devices can be further used for analysis providing constant cost per sample.

Barcode

Automated assay detection

Back View



ScreenTape details

Buffer chamber

Ready to use

Separation matrix

Ready-to-use separation matrix

Electrodes

Individual sample separation

- Ready-to use ScreenTape device
- No risk for cross contamination
- Partially-used ScreenTape devices can be further used
- Constant cost per sample.



Complete sizing range



RNA: 100 – 600 nt



D5000: 100 – 5000 bp



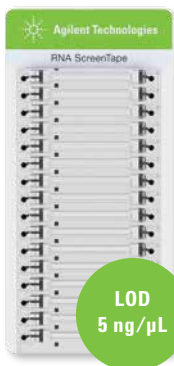
D1000: 35 – 1000 bp



Genomic DNA: 200 – 60,000 bp

Complete sensitivity range

Select from a complete ScreenTape portfolio for DNA or RNA analysis based on your application and sensitivity requirements.



RNA

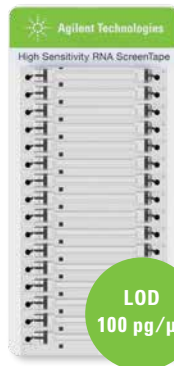
1 μ L of sample
25 – 500 ng/ μ L



Sizing Range:
100 – 6000 nt

RNA Integrity Number
equivalent (RIN[®])

LOD
5 ng/ μ L



High Sensitivity RNA

2 μ L of sample
500 – 10,000 pg/ μ L



Sizing Range:
100 – 6000 nt

RNA Integrity Number
equivalent (RIN[®])

LOD
100 pg/ μ L



D1000

1 μ L of sample
0.1 – 50 ng/ μ L



Sizing Range:
35 – 1000 bp

LOD
0.1 ng/ μ L



High Sensitivity D1000

2 μ L of sample
10 – 1000 pg/ μ L



Sizing Range:
35 – 1000 bp

LOD
5 pg/ μ L



D5000

1 μ L of sample
0.1 – 50 ng/ μ L



Sizing Range:
100 – 5000 bp

LOD
0.1 ng/ μ L



High Sensitivity D5000

2 μ L of sample
10 – 1000 pg/ μ L



Sizing Range:
100 – 5000 bp

LOD
5 pg/ μ L



Genomic DNA

1 μ L of sample
10 – 100 ng/ μ L



Sizing Range:
200 – 60,000 bp

LOD
5 pg/ μ L

DNA Integrity
Number (DIN)

AUTOMATED SAMPLE QC HAS NEVER BEEN



STEP 1

Select ScreenTape assay
and prepare samples

SO FAST AND FLEXIBLE!



STEP 2

Place samples and ScreenTape devices
in 4200 TapeStation instrument

STEP 3

Press start and review results
in 4200 TapeStation Software

COMPLETE SOFTWARE PACKAGE

Streamline your data analysis and reporting

The 4200 TapeStation software is simple and intuitive, streamlining instrument control as well as data analysis and reporting.

4200 TapeStation Controller Software

Required consumable

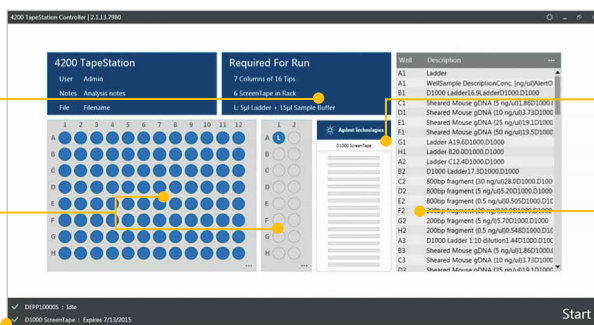
Software displays the required consumables based on number of samples for analysis

Intuitive sample selection

Full flexibility for sample selection independent on sample location

System status & Observations

Status, warnings and errors are displayed in the task bar



Automatic assay selection

Barcode recognizes assay type and available number of ScreenTape lanes for analysis

Sample name import/export

CSV file import and export function for sample name assignment

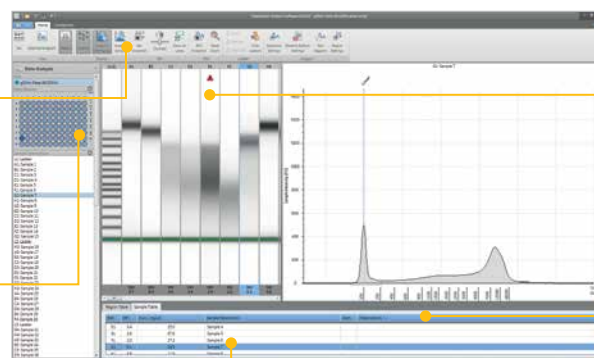
TapeStation Analysis Software

Analysis functions

Functions are navigated through a context-sensitive ribbon

Navigation pane

Navigate through experiments and individual lanes. Lanes can be selected in any order from the Plate Selector



Error reporting

Analysis issues are flagged on the gel image or in the sample table

Observations

Warnings and errors are displayed in the observations column of the result table

Result presentation

Customizable views of gel image, electropherogram and data table

You can display your results as an electropherogram, as a familiar gel image or in tabular format for effortless sample comparison. Depending on your application, the software automatically determines size, quantity and RNA or DNA Integrity Numbers (RIN[®], DIN), saving you time and reducing errors. Reports can easily be generated and saved in PDF format, or exported for editing in Word or Excel.

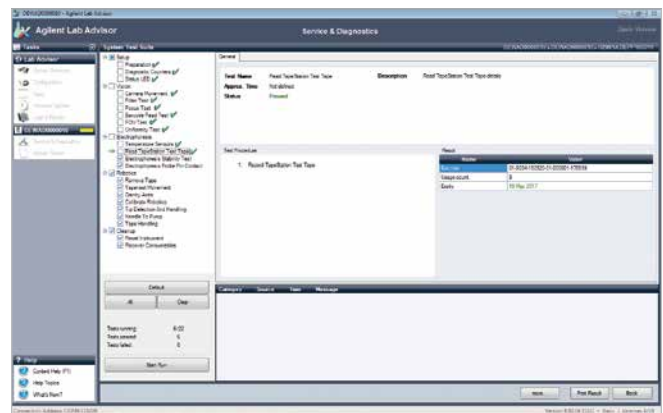
COMPLETE SERVICE AND SUPPORT

Maximize uptime through diagnostic tools

Achieve highest productivity and lowest total cost of ownership through advanced system diagnostics. Using a dedicated TapeStation TestTape device, you can run an instrument selftest through the Agilent Lab Advisor software.



TapeStation TestTape for selftest instrument diagnosis through the Agilent Lab Advisor software



Agilent Lab Advisor Software offers a comprehensive toolset for functionality tests and maintenance of your instrument

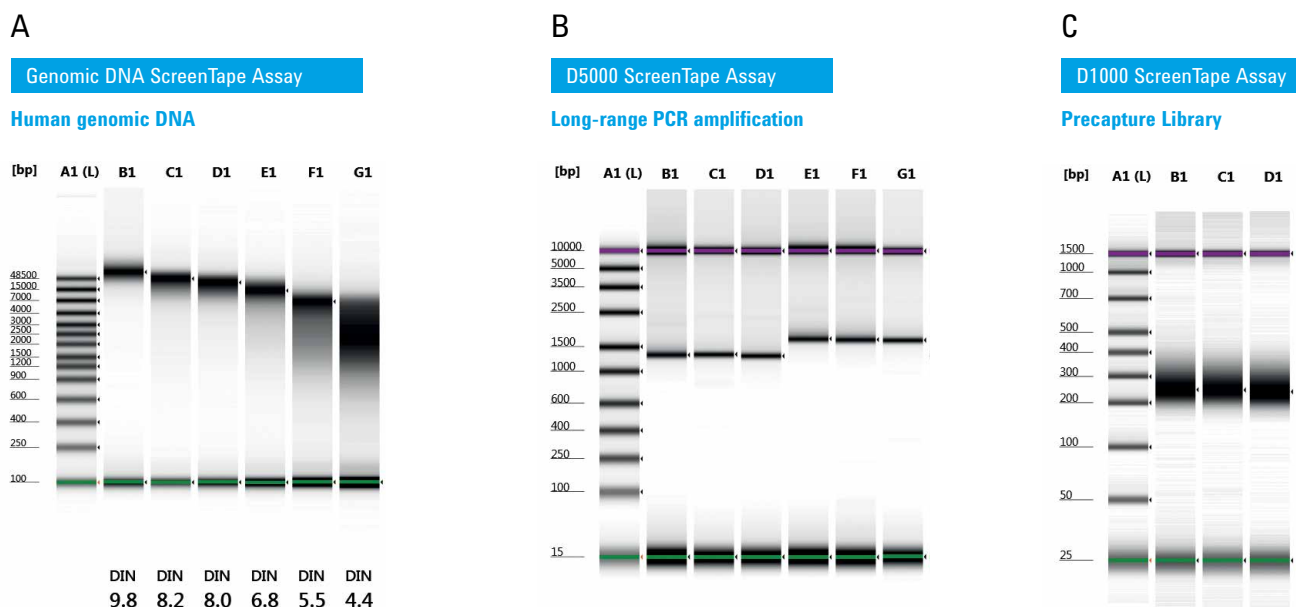
Get peace of mind through instrument and application support

Agilent offers an application-related startup service to familiarize you with the instrument and software, as well as an application of your choice. This service is delivered onsite and gets you running real samples – fast. Choose from additional service options to suit your lab's specific service-level needs.

All system components carry a one-year factory warranty and the instrument is covered by the premium repair service. The premium warranty service can be extended by one, two or five years. Warranty extensions include an annual system preventive maintenance service.

COMPLETE DNA APPLICATIONS

The Agilent DNA ScreenTape assays can be used at several quality control points in the Next Generation Sequencing (NGS) workflow: genomic DNA QC including the DNA Integrity Number (DIN), shearing of genomic DNA, library amplification, and postcapture amplified library. Additional applications include genotyping, multiplex PCR fragment analysis as well as QC of quantitative PCR products.

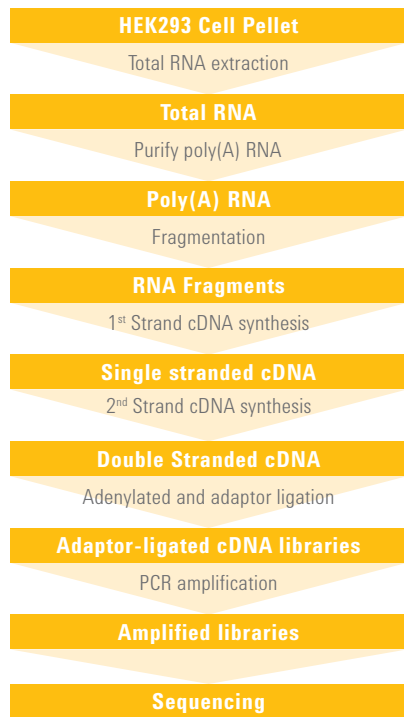


The figure shows genomic DNA smears at different degradation stages (A), long range PCR fragments (B) and precapture library preparation (C) analyzed with Genomic DNA ScreenTape assay, D5000 ScreenTape assay and D1000 ScreenTape assay, respectively

COMPLETE RNA APPLICATIONS

The Agilent RNA ScreenTape assays are used for the determination of quality and quantity of total RNA samples from eukaryote or prokaryote origin. The RNA Integrity Number equivalent (RIN^e) provides a user independent integrity score for total RNA. The optional ladder can also provide sizing information.

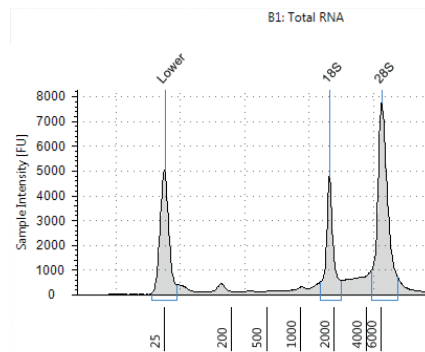
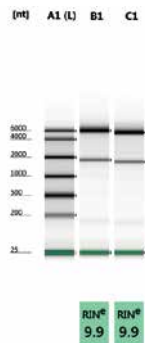
A



The figure shows starting total RNA and final cDNA libraries generated with Agilent's Stand-Specific RNA library preparation workflow (A) analyzed for sample integrity and quantity using the RNA ScreenTape assay (B) and D1000 ScreenTape assay (C)

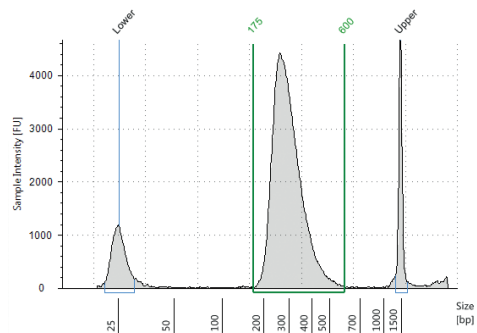
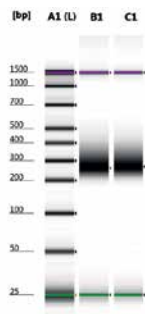
B

QC: RNA integrity
RNA ScreenTape assay



C

QC: Sizing (175 – 600 bp)
D1000 ScreenTape assay



Learn more:

www.agilent.com/genomics/tapestation

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