

# Agilent Bioanalyzer and TapeStation Systems

Systems, consumables and supplies



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# Agilent 2100 Bioanalyzer System

## One platform – Endless possibilities

The Agilent 2100 Bioanalyzer system offers fast and reliable separation, sizing and quantification of DNA, RNA and proteins by miniaturized on-chip electrophoresis surpassing labor intensive slab gels by speed, reproducibility and independence from user influences.

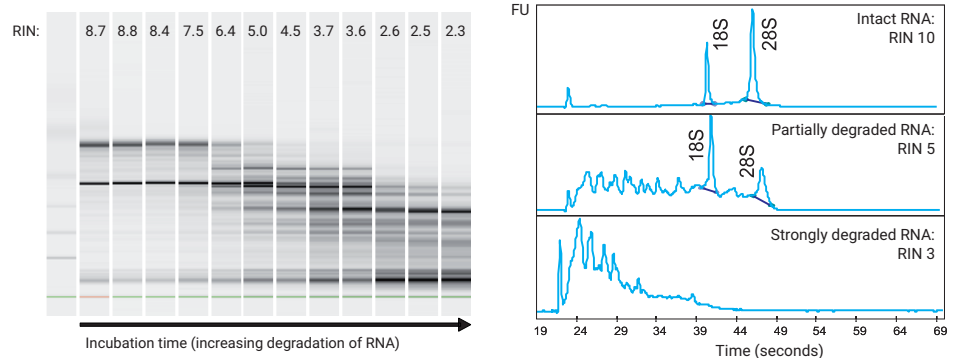


## Key benefits

- Sample quality control in multiple workflows, including sequencing, gene expression, biopharmaceuticals, and genome editing.
- Provides data on abundance, integrity, distribution, and impurities.
- Digital data with various data display options – gel view, electropherograms, and tables – allow convenient analysis, archiving, and simple comparison of samples from multiple chips.
- Multiple exportable data formats (xml, csv, html, pdf, wmf, jpg, tif, bmp, and aia).
- Availability of compliance services and features.

## Ensuring high quality RNA for downstream applications

The Agilent 2100 Bioanalyzer system is a well-accepted standard for integrity measurements of RNA. In less than 30 minutes, total RNA, mRNA, or small RNA is checked for quantity and degradation. The unique RIN offers an objective measurement of total RNA quality to ensure reproducible results from downstream experiments, such as next generation sequencing, gene expression microarrays or qPCR.



# Agilent 2100 Bioanalyzer System

The Agilent 2100 Bioanalyzer system is a versatile system for sizing, quantification and quality control of DNA, RNA, and proteins on a single platform.



Agilent 2100 Bioanalyzer system

Part number	Description	Quantity
G2939BA	2100 Bioanalyzer instrument For electrophoretic assays only. Model number G2939B. Includes the Bioanalyzer instrument, electrode cartridge, 2100 Expert software, instrument and electrophoresis licenses, chip priming station, chip vortexer, test chips, accessories, and installation and familiarization services. <i>Note: Does not include PC. It is optional to add on the 2100 Expert SW laptop PC bundle for a fully validated system. (Required for Security Pack installations)</i>	1 system
G2953CA	2100 Expert SW laptop PC bundle Laptop PC with 2100 Expert software pre-installed. <i>Note: Required for Security Pack installations.</i>	1 PC

Agilent 2100 Expert software

Part number	Description	Quantity
G2946CA	2100 Expert software upgrade Package for upgrade to the latest revision of 2100 Expert software. Includes the required license keys to run the instrument.	1 upgrade
G2949CA	2100 Expert Security Pack license For CFR 21 Part 11 compliance. Includes compliance software upgrade and license <i>Note: Requires 2100 Expert SW laptop PC bundle (G2953CA).</i>	1 license

# Agilent 2100 Bioanalyzer System

## Accessories and spare parts

Part number	Description	Quantity
5065-4413	Electrode cartridge Removable cartridge with detachable 16-pin electrode assembly for easy cleaning. For RNA, DNA, and protein assays.	1 cartridge
5065-9951	Electrode cleaner kit Includes additional electrode cleaners for the maintenance of the electrode cartridge.	7 electrode cleaners
G2938-68300	Test chip kit For running instrument diagnostics and troubleshooting electrophoretic assays. Includes autofocus chip, electrode/diode test chip, and documentation.	1 kit
5065-4401	Chip priming station Used to load gel matrix into a chip with a syringe provided in each assay kit – used for RNA, DNA, and protein assays. Includes priming station, timer, and 1 syringe clip.	1 kit
5042-1398	Adjustable clip for priming station Used in combination with a syringe to apply defined pressure for chip priming.	1 clip
G2938-68716	Gasket Kit for chip priming station Includes 1 syringe adapter, 10 gaskets, and 1 mounting ring.	1 kit
5185-5990	Filters for gel matrix Extra spin filters for the gel matrix in RNA, DNA, and protein assays.	25 filters
2110-0007	Fuse for 2100 Bioanalyzer power supply 1 A / 250 V.	1 fuse
RS232-61601	RS-232 cable Connector cable between desktop or laptop PC and Agilent 2100 Bioanalyzer instrument.	1 cable
5188-8031	USB Serial adapter cable Connects RS-232 cables to USB PC ports (for PCs without serial ports).	1 cable

## Services

For more details on our service portfolio, please contact your sales representative or Agilent's Worldwide Sales and Support Phone Assistance

[www.agilent.com/chem/contactus](http://www.agilent.com/chem/contactus)

# Bioanalyzer DNA Kits and Reagents

The Agilent DNA kits, together with the Agilent 2100 Bioanalyzer system, are ideal for automated sizing and quantification of PCR fragments, restriction digests or fragmented DNA.



## DNA kits and reagents

Part Number	Description	Quantity
5067-4626	High Sensitivity DNA kit For the separation, sizing and quantification of dsDNA samples of limited abundance ranging from 50 to 7000 bp. Includes 10 chips, reagents, ladder and consumables.	For 110 samples
5067-4627	High Sensitivity DNA reagents Includes reagents and ladder; no chips.	For 10 chips
5067-1504	DNA 1000 kit For sizing and quantification of dsDNA fragments ranging from 25 to 1000 bp. Includes 25 chips, reagents, ladder and consumables.	For 300 samples
5067-1505	DNA 1000 reagents Includes reagents and ladder; no chips.	For 25 chips
5067-1506	DNA 7500 kit For sizing and quantification of dsDNA fragments ranging from 100 to 7500 bp. Includes 25 chips, reagents, ladder and consumables.	For 300 samples
5067-1507	DNA 7500 reagents Includes reagents and ladder; no chips.	For 25 chips
5067-1508	DNA 12000 kit For sizing and quantification of dsDNA fragments ranging from 100 to 12000 bp. Includes 25 chips, reagents, ladder and consumables.	For 300 samples
5067-1509	DNA 12000 reagents Includes reagents and ladder; no chips.	For 25 chips

# Bioanalyzer DNA Kits and Reagents

## DNA specifications

Analytical specifications	High Sensitivity DNA	DNA 1000	DNA 7500	DNA 12000
<b>Sizing range</b>	50 – 7,000 bp	25 – 1,000 bp	100 – 7,500 bp	100 – 12,000 bp
<b>Typical resolution</b>	50 – 600 bp: 10 % 600 – 7,000 bp: 20 %	25 – 100 bp: 5 % 100 – 500 bp: 5 % 500 – 1,000 bp: 10 %	100 – 1,000 bp: 5 % 1,000 – 7,500 bp: 15 %	100 – 1,000 bp: 5 % 1,000 – 12,000 bp: 15 %
<b>Sizing precision<sup>1</sup></b>	5 % CV	5 % CV	5 % CV	5 % CV
<b>Sizing accuracy<sup>1</sup></b>	±10 %	±10 %	±10 %	±15 %
<b>Quantitative precision<sup>1</sup></b>	50 – 2,000 bp: 15% CV 2,000 – 7,000 bp: 10% CV	25 – 500 bp: 15 % CV 500 – 1,000 bp: 5 % CV	100 – 1,000 bp: 10 % CV 1,000 – 7,500 bp: 5 % CV	100 – 1,000 bp: 15 % CV 1,000 – 12,000 bp: 10 % CV
<b>Quantitative accuracy<sup>1</sup></b>	±20 %	±20 %	±20 %	±25 %
<b>Quantitative range<sup>1</sup></b>	5 – 500 pg/μL	0.5 – 50 ng/μL	0.5 – 50 ng/μL	0.5 – 50 ng/μL
<b>Maximum buffer concentration in sample</b>	10 mM Tris and 1 mM EDTA	250 mM for KCl 250 mM for NaCl 15 mM for MgCl <sub>2</sub>	250 mM for KCl 250 mM for NaCl 15 mM for MgCl <sub>2</sub>	250 mM for KCl 250 mM for NaCl 15 mM for MgCl <sub>2</sub>
<b>Physical specifications</b>				
<b>Analysis time</b>	45 minutes	35 minutes	30 minutes	30 minutes
<b>Samples per chip</b>	11	12	12	12
<b>Sample volume required</b>	1 μL	1 μL	1 μL	1 μL
<b>Kit stability</b>	4 months	4 months	4 months	4 months
<b>Kit size</b>	110 samples	300 samples	300 samples	300 samples

<sup>1</sup>Determined using ladder as sample

## DNA application notes

Publication number	Description
5991-5128EN	Absolute real-time PCR: A comparison of spectrophotometric and on-chip methods for external standard curve construction from different nucleic acid dosages
5991-0483EN	DNA quality control of formalin-fixed paraffin-embedded and fresh-frozen tissues prior to target-enrichment and next generation sequencing
5990-8382EN	Low input DNA size selection on the Pippin Prep System using the Agilent 2100 Bioanalyzer system with the Agilent High Sensitivity DNA kit
5990-5008EN	Improving sample quality for target enrichment and next-gen sequencing with the Agilent High Sensitivity DNA kit and the Agilent SureSelect Target Enrichment platform
5990-4942EN	Automation of Agencourt AM Pure Purification kit for the purification of Next-Generation Sequencing sample preparation reactions on Bravo
5989-6836EN	Use of the Agilent 2100 Bioanalyzer system for basmati rice authenticity testing

This list only provides an overview of selected DNA application notes. Visit our website at [www.agilent.com/genomics/bioanalyzer](http://www.agilent.com/genomics/bioanalyzer) for a complete list of all available application and technical notes.

# Bioanalyzer RNA Kits and Reagents

The Agilent RNA kits and RNA Integrity Number (RIN) are widely accepted for RNA quality assessment. Perform fast, easy and precise integrity checks and sample quantification before any RNA-dependent application.



## RNA kits and reagents

Part number	Description	Quantity
5067-1511	RNA 6000 Nano kit For analysis and quantification of total RNA and mRNA samples of 25 to 500 ng/μL in concentration. Includes 25 chips, reagents, ladder and consumables.	For 300 samples
5067-1512	RNA 6000 Nano reagents Includes reagents and ladder; no chips.	For 25 chips
5067-1529	RNA 6000 Nano ladder Includes ladder only.	For 25 chips
5067-1513	RNA 6000 Pico kit For the analysis of RNA samples of low abundance down to 50 pg/μL of total RNA or 250 pg/μL of mRNA. Includes 25 chips, reagents, ladder and consumables.	For 275 samples
5067-1514	RNA 6000 Pico reagents Includes reagents and ladder; no chips.	For 25 chips
5067-1535	RNA 6000 Pico ladder Includes ladder only.	For 25 chips
5067-1548	Small RNA kit For the analysis and quantification of small RNA samples ranging from 6 to 150 nt in size and 50 to 2000 pg/μL in concentration. Includes 25 chips, reagents, ladder and consumables.	For 275 samples
5067-1549	Small RNA reagents Includes reagents and ladder; no chips.	For 25 chips
5067-1550	Small RNA ladder Includes ladder only.	For 25 chips



# Bioanalyzer RNA Kits and Reagents

## RNA specifications

Analytical specifications	RNA 6000 Nano Total RNA	RNA 6000 Nano mRNA	RNA 6000 Pico Total RNA	RNA 6000 Pico mRNA	Small RNA
<b>Sizing range</b>	-	-	-	-	6 – 150 nt
<b>Sensitivity<sup>1</sup></b>	5 ng/μL in water	25 ng/μL in water	50 pg/μL in water 200 pg/μL in TE	250 pg/μL in water 500 pg/μL in TE	50 pg/μL in water <sup>3</sup>
<b>Quantitative precision</b>	10 % CV	10 % CV	20 % CV	20 % CV	25 % CV
<b>Quantitative accuracy<sup>2</sup></b>	±20 %	±20 %	±30 %	±30 %	-
<b>Quantitative range</b>	25 – 500 ng/μL	25 – 250 ng/μL	-	-	50 – 2,000 pg/μL of purified miRNA in water
<b>Qualitative range</b>	5 – 500 ng/μL	25 – 250 ng/μL	50 – 5,000 pg/μL in water	250 – 5,000 pg/μL in water	50 – 2,000 pg/μL of purified miRNA in water
<b>Maximum buffer concentration in sample</b>	100 mM Tris 0.1 mM EDTA or 125 mM NaCl or 15 mM MgCl <sub>2</sub>	100 mM Tris 0.1 mM EDTA or 125 mM NaCl or 15 mM MgCl <sub>2</sub>	50 mM Tris 0.1 mM EDTA or 50 mM NaCl or 15 mM MgCl <sub>2</sub>	50 mM Tris 0.1 mM EDTA or 50 mM NaCl or 15 mM MgCl <sub>2</sub>	10 mM Tris 0.1 mM EDTA
<b>Physical specifications</b>					
<b>Analysis time</b>	30 minutes	30 minutes	30 minutes	30 minutes	30 minutes
<b>Samples per chip</b>	12	12	11	11	11
<b>Sample volume required</b>	1 μL	1 μL	1 μL	1 μL	1 μL
<b>Kit stability</b>	4 months	4 months	4 months	4 months	4 months
<b>Kit size</b>	300 samples	300 samples	275 samples	275 samples	275 samples

<sup>1</sup>Signal-to-noise >3 (single peak)

<sup>2</sup>Determined using ladder as sample

<sup>3</sup>Measured for the 40 nt fragment of the Small RNA ladder

## RNA applications notes

Publication number	Description
5989-1165EN	RNA Integrity Number (RIN) – Standardization of RNA quality control
5989-7730EN	Optimizing real-time quantitative PCR experiments with the Agilent 2100 Bioanalyzer system
5990-5557EN	RNA quality control in miRNA expression analysis
5990-8850EN	Assessing integrity of plant RNA with the Agilent 2100 Bioanalyzer system
5991-7557EN	Agilent integrated solutions for design, synthesis and quality control of Guide RNA for CRISPR-Cas9 genome editing workflows
5991-7903EN	Assessing Integrity of Insect RNA

This list only provides an overview of selected RNA application notes. Visit our website at [www.agilent.com/genomics/bioanalyzer](http://www.agilent.com/genomics/bioanalyzer) for a complete list of all available application and technical notes.

# Bioanalyzer Protein Kits and Reagents

The Agilent Protein kit portfolio provides a fast and flexible way for the assessment of protein concentration, identity, and purity in a wide variety of samples.



## Protein kits and reagents

Part number	Description	Quantity
5067-1515	Protein 80 kit For sizing and quantification of protein samples from 5 to 80 kDa. Includes 25 chips, reagents, ladder and consumables.	For 250 samples
5067-1516	Protein 80 reagents Includes reagents and ladder; no chips.	For 25 chips
5067-1517	Protein 230 kit For sizing and quantification of protein samples from 14 to 230 kDa. Includes 25 chips, reagents, ladder and consumables.	For 250 samples
5067-1518	Protein 230 reagents Includes reagents and ladder; no chips.	For 25 chips
5067-1575	High Sensitivity Protein 250 kit For sizing and highly sensitive quantification of protein samples from 10 to 250 kDa. Includes 10 chips, analysis and labeling reagents, and consumables.	For 100 samples
5067-1576	High Sensitivity Protein 250 reagents Includes reagents for Bioanalyzer analysis; no chips.	For 10 chips
5067-1577	High Sensitivity Protein 250 labeling kit Includes reagents for labeling reaction.	For 100 samples
5067-1578	High Sensitivity Protein 250 ladder Includes ladder only.	For 10 chips

# Bioanalyzer Protein Kits and Reagents

## Protein specifications

Analytical specifications	Protein 80	Protein 230	High Sensitivity Protein 250
Sizing range	5 – 80 kDa	14 – 230 kDa	10 – 250 kDa
Typical resolution	10 %	10 %	10 %
Sensitivity <sup>1</sup>	6 ng/μL CAII in PBS 15 ng/μL BSA in PBS 10 ng/μL CAII in 0.5 M NaCl 30 ng/μL BSA in 0.5 M NaCl	6 ng/μL CAII in PBS 15 ng/μL BSA in PBS 30 ng/μL BSA in 0.5 M NaCl	1 pg/μL labeled BSA in water on chip 5 pg/μL labeled BSA in PBS on chip (Labeling reaction at 1 ng/μL of total protein)
Sizing precision	3 % CV (CAII, BLG)	3 % CV (BSA, CAII)	3 % CV (BSA)
Sizing accuracy	±10 % (CAII, BLG)	±10 % (BSA, CAII)	±10 % (BSA)
Quantitative precision	20 % CV (CAII, BLG)	20 % CV (BSA, CAII)	20 % CV (BSA)
Quantitative range	60 – 2,000 ng/μL CAII in PBS	15 – 2,000 ng/μL CAII in PBS 30 – 2,000 ng/μL BSA in PBS	typically up to 4 orders of magnitude (0.1-1000 ng/μL BSA)
Qualitative range	6 – 4,000 ng/μL CAII and BLG in PBS	6 – 5,000 ng/μL CAII in PBS 15 – 5,000 ng/μL BSA in PBS	-
<b>Physical specifications</b>			
Analysis time	30 minutes	25 minutes	30 minutes
Samples per chip	10	10	10
Sample volume required	4 μL	4 μL	5 μL
Kit stability	4 months	4 months	6 months
Kit size	250 samples	250 samples	100 samples

CAII = carbonic anhydrase, BSA = bovine serum albumin, BLG = beta-lactoglobulin

<sup>1</sup>Signal-to-noise >3 (single peak)

## Application notes

Publication number	Description
5989-7735EN	Rapid wheat varietal identification using the Agilent 2100 Bioanalyzer system and automated pattern-matching
5990-4097EN	Immunoprecipitation and the High Sensitivity Protein 250 assay
5990-8125EN	Milk protein analysis with the Agilent 2100 Bioanalyzer system and the Agilent Protein 80 kit
5990-9593EN	Analysis of PEGylated proteins using the Agilent 2100 Bioanalyzer system
5991-3435EN	A comparative study of analytical parameters for proteins with different degrees of glycosylation

This list only provides an overview of selected protein application notes. Visit our website at [www.agilent.com/genomics/bioanalyzer](http://www.agilent.com/genomics/bioanalyzer) for a complete list of all available application and technical notes.

# Agilent TapeStation Systems

## A complete solution for true end-to-end electrophoretic quality control for DNA and RNA samples

Agilent TapeStation systems are automated electrophoresis solutions for quality control (QC) of DNA and RNA samples. The TapeStation systems are all-in-one platforms, which include instrumentation, data processing software, reagents, and ScreenTape devices for analysis of sample size, quantity, and integrity. Delivering highly accurate and precise analytical evaluation, the systems fit perfectly into next-generation sequencing (NGS) or biobank workflows for low to high sample throughput.



### 4200 TapeStation key benefits

- Fully automated sample processing for up to 96 samples
- Sample loading from two 8-tube strips or a 96-well plate
- Complete scalability: Analyze any sample number from 1 to 96 samples
- Reliable, reproducible results within 1-2 minutes per sample and less than 90 minutes for 96 samples

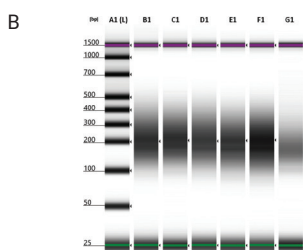
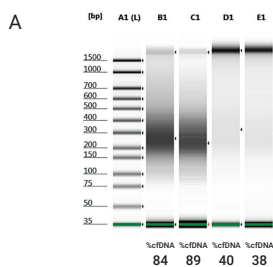
### 4150 TapeStation key benefits

- Sample loading from two 8-tube strips
- Complete scalability: Analyze any sample number from 1 to 16 samples
- Reliable, reproducible results within less than 20 minutes for 16 samples
- Small footprint saves precious bench space in your laboratory

### True end-to end sample QC during NGS workflows

The TapeStation systems offer a full range of applications for all steps within any NGS workflow:

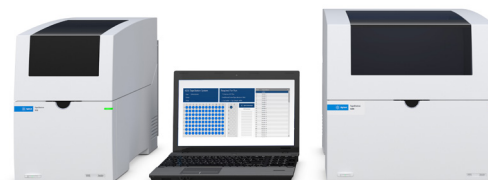
- Integrity standards for RNA (RNA Integrity Number equivalent, RIN<sup>e</sup>) and genomic DNA (DNA Integrity Number, DIN)
- QC of cell-free DNA with qualification based on the calculation of %cfDNA
- QC of fragmented genomic DNA e.g. DNA extracted from FFPE tissue
- QC of adapter ligated and amplified NGS libraries
- Analysis of post-capture amplified libraries after target enrichment



cfDNA samples with different amounts of high molecular weight DNA contamination (A), and NGS libraries (B)

As the 4200 TapeStation system is compatible with 96 well plates, the instrument is the perfect sample QC tool for customers with higher-throughput needs.

For labs handling smaller numbers of samples, the 4150 TapeStation system for 1 to 16 samples is the affordable, entry-level alternative.



#### Agilent TapeStation systems

Part number	Description	Quantity
G2991BA	4200 TapeStation system For DNA and RNA analysis. Includes the 4200 TapeStation instrument, laptop with TapeStation software, vortexer, accessories, consumables, user information, and installation and familiarization services.	1 system
G2992AA	4150 TapeStation instrument For DNA and RNA analysis. Includes 4150 TapeStation instrument, TapeStation software, vortexer, accessories, consumables and user information, and installation and familiarization services.	1 system
G2999AA	1 TapeStation software laptop PC bundle, Laptop PC with TapeStation software pre-installed	1 PC

#### TapeStation software

Description
TapeStation software Software for instrument control and analysis of data generated by the Agilent TapeStation systems. No purchase or licenses required. Download free of charge from: <a href="http://www.agilent.com/genomics/tapestation-sw">www.agilent.com/genomics/tapestation-sw</a>

#### Accessories and spare parts

Part number	Description	Quantity
5042-8502	96-well sample plates (for 4200 TapeStation system)	25 plates
5067-5154	96-well plate foil seal (for 4200 TapeStation system)	100 foils
5067-5599	Loading tips (112 tips/pk)	10 packs
5067-5598	Loading tips (112 tips/pk)	1 pack
401428	Optical tube strips, 8x strip	1 box of 120
401425	Optical caps, 8x strip	1 box of 120
5067-5601	TapeStation Test Tape	1 test tape
5067-5783	Needle Change Cartridge	1 cartridge
G2991-40007	ScreenTape Rack (for 4200 TapeStation system)	1 rack
5067-5786	32-Pin Electrode Cartridge	1 cartridge
G2992-40042	Tube Strip Holder	1 holder
G2992-40046	Tip Waste Bucket	1 bucket
5188-8047	USB cable, male-A – male-B	1 cable
G2992-68003	Upper Tapenest cover	1 cover
G2992-40014	Lower Tapenest cover	1 cover

## Services

For more details on our service portfolio, please contact your sales representative or Agilent's Worldwide Sales and Support Phone Assistance. [www.agilent.com/chem/contactus](http://www.agilent.com/chem/contactus)

# TapeStation DNA ScreenTape and Reagents

The DNA ScreenTape assays for the Agilent TapeStation systems are ideal for sample QC of input genomic or cell-free DNA and downstream analysis within the Next Generation Sequencing workflow. Select the sizing range appropriate for your application.



DNA consumables and reagents

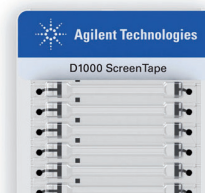
Part number	Description	Quantity
<b>D1000 ScreenTape assay – 35 bp to 1,000 bp</b>		
5067-5582	D1000 ScreenTape For the analysis of DNA from 35 to 1,000 bp. Includes 7 ScreenTape devices.	For 112 samples
5067-5583	D1000 reagents For the analysis of DNA from 35 to 1,000 bp. Includes ladder and sample buffer. Order with 5067-5582.	For 112 samples
5067-5586	D1000 ladder For the analysis of DNA from 35 to 1,000 bp. Includes 10 µL ladder.	
5067-5602	D1000 sample buffer For the analysis of DNA from 35 to 1,000 bp. Includes 400 µL sample buffer.	
5067-5584	High Sensitivity D1000 ScreenTape For the high sensitivity analysis of DNA from 35 to 1,000 bp. Includes 7 ScreenTape devices.	For 112 samples
5067-5585	High Sensitivity D1000 reagents For the high sensitivity analysis of DNA from 35 to 1,000 bp. Includes ladder and sample buffer. Order with 5067-5584.	For 112 samples
5067-5587	High Sensitivity D1000 ladder For the high sensitivity analysis of DNA from 35 to 1,000 bp. Includes 20 µL ladder.	
5067-5603	High Sensitivity D1000 sample buffer For the high sensitivity analysis of DNA from 35 to 1,000 bp. Includes 300 µL sample buffer.	

# TapeStation DNA ScreenTape and Reagents

DNA consumables and reagents continued

Part number	Description	Quantity
<b>D5000 ScreenTape assay – 100 bp to 5,000 bp</b>		
5067-5588	D5000 ScreenTape For the analysis of DNA from 100 to 5,000 bp. Includes 7 ScreenTape devices.	For 105 samples
5067-5589	D5000 reagents For the analysis of DNA from 100 to 5,000 bp. Includes ladder and sample buffer. Order with 5067-5588.	For 105 samples
5067-5590	D5000 ladder For the analysis of DNA from 100 to 5,000 bp. Includes 10 µL ladder.	
5067-5592	High Sensitivity D5000 ScreenTape For the high sensitivity analysis of DNA from 100 to 5,000 bp. Includes 7 ScreenTape devices.	For 105 samples
5067-5593	High Sensitivity D5000 reagents For the high sensitivity analysis of DNA from 100 to 5,000 bp. Includes ladder and sample buffer. Order with 5067-5592.	For 105 samples
5067-5594	High Sensitivity D5000 ladder For the high sensitivity analysis of DNA from 100 to 5,000 bp. Includes 20 µL ladder.	
<b>Cell-free DNA ScreenTape assay – 50 bp to 800 bp</b>		
5067-5630	Cell-free DNA ScreenTape For the analysis of cell-free DNA from 50 to 800 bp. Includes 7 ScreenTape devices.	For 112 samples
5067-5631	Cell-free DNA reagents For the analysis of cell-free DNA from 50 to 800 bp. Includes ladder and sample buffer. Order with 5067-5630.	For 112 samples
5067-5632	Cell-free DNA ladder For the analysis of cell-free DNA from 50 to 800 bp. Includes 50 µL ladder and sample buffer.	
5067-5633	Cell-free DNA Sample Buffer For the analysis of cell-free DNA from 50 to 800 bp. Includes 300 µL sample buffer.	
<b>Genomic DNA ScreenTape assay – 200 bp to &gt; 60,000 bp</b>		
5067-5365	Genomic DNA ScreenTape For the analysis of genomic DNA from 200 to > 60,000 bp. Includes 7 ScreenTape devices.	For 105 samples
5067-5366	Genomic DNA reagents For the analysis of genomic DNA from 200 to > 60,000 bp. Includes ladder and sample buffer. Order with 5067-5365.	For 105 samples

# TapeStation DNA ScreenTape and Reagents



DNA specifications continued

Analytical specifications	D1000 ScreenTape	High Sensitivity D1000 ScreenTape	D5000 ScreenTape	High Sensitivity D5000 ScreenTape
<b>Sizing range</b>	35 – 1,000 bp	35 – 1,000 bp	100 – 5,000 bp	100 – 5,000 bp
<b>Typical resolution</b>	35 – 300 bp: 15% 300 – 1,000 bp: 10%	35 – 300 bp: 15% 300 – 1,000 bp: 10%	400 – 5,000 bp: 15%	400 – 5,000 bp: 15%
<b>Sensitivity<sup>1</sup></b>	0.1 ng/μL	5 pg/μL	0.1 ng/μL	5 pg/μL
<b>Sizing precision</b>	5 % CV <sup>2</sup>	5 % CV <sup>2</sup>	5 % CV <sup>4</sup>	10 % CV <sup>4</sup>
<b>Sizing accuracy</b>	±10 % <sup>2,3</sup>	±10 % <sup>2,3</sup>	±10 % <sup>4</sup>	±15 % <sup>4</sup>
<b>Quantitative precision</b>	0.1 – 1 ng/μL: 15 % CV 1 – 50 ng/μL: 10 % CV	15 % CV	0.1 – 1 ng/μL: 15% CV 1 – 50 ng/μL: 10% CV	15 % CV
<b>Quantitative accuracy</b>	±20 % <sup>2</sup>	±20 % <sup>2</sup>	±20 %	±25 %
<b>Quantitative range</b>	0.1 – 50 ng/μL	10 – 1,000 pg/μL	0.1 – 50 ng/μL	10 – 1,000 pg/μL
<b>Maximum buffer concentration in sample</b>	20 mM KCl 60 mM phosphate buffer 60 mM guanidine-HCl 240 mM NaCl 60 mM NaOAc	7 mM KCl 20 mM phosphate buffer 20 mM guanidine-HCl 80 mM NaCl 20 mM NaOAc	250 mM KCl 250 mM Tris-HCl 125 mM NaCl 50 mM NaOAc 25 mM MgCl <sub>2</sub> 25 mM BSA 25 mM guanidine-HCl	25 mM KCl 25 mM Tris-HCl 12.5 mM NaCl 5 mM NaOAc 2.5 mM MgCl <sub>2</sub> 2.5 mM BSA 2.5 mM guanidine-HCl
<b>Physical specifications</b>				
<b>Analysis time</b>	16 samples < 20 min 96 samples < 90 min	16 samples < 20 min 96 samples < 105 min	15 samples < 25 min 96 samples < 135 min	15 samples < 20 min 96 samples < 120 min
<b>Samples per consumable</b>	16	16	15	15
<b>Sample volume required</b>	1 μL	2 μL	1 μL	2 μL
<b>Kit stability</b>	6 months	6 months	4 months	4 months
<b>Kit size</b>	112 samples	112 samples	105 samples	105 samples

<sup>1</sup> Signal-to-noise >3 (single peak)

<sup>2</sup> Measured using one ladder per ScreenTape device

<sup>3</sup> Sizing accuracy for analysis with electronic ladder: ±20 %

<sup>4</sup> Determined using ladder as sample

DNA application notes and technical overviews

Publication number	Description
5991-6892EN	Evaluating the Agilent 4200 TapeStation System for High Throughput Sequencing Quality Control
5991-7615EN	Use of the Agilent 4200 TapeStation System for Sample Quality Control in the Whole Exome Sequencing Workflow at the German Cancer Research Center (DKFZ)
5994-2233EN	Quality Control of NGS Libraries with Daisy Chains
5994-2284EN	Quality Control of Cell-free DNA Samples Analyzed with Next-Generation Sequencing
5991-5360EN	The DNA Integrity Number (DIN) Provided by the Genomic DNA ScreenTape Assay Allows for Streamlining of NGS on FFPE Tissue Samples



# TapeStation DNA ScreenTape and Reagents

DNA specification continued

Analytical specifications	Genomic DNA ScreenTape	Cell-free DNA ScreenTape
Sizing range	200 to > 60,000 bp	50 – 800 bp
Sensitivity <sup>1</sup>	0.5 ng/μL	20 pg/μL
Sizing precision <sup>2</sup>	200 – 15,000 bp: 15 % CV	10 % CV
Sizing accuracy <sup>2</sup>	200 – 15,000 bp: ±15 %	±15 % <sup>3</sup>
Quantitative precision	15 % CV	15 % CV <sup>2</sup>
Quantitative accuracy	±20 %	±20 % <sup>2</sup>
Quantitative range	10 – 100 ng/μL	100 – 4000 pg/μL
Quantity score <sup>3</sup>	DIN	%cfDNA
DIN functional range <sup>4</sup>	5–300 ng/μL	–
%cfDNA functional range	–	100 – 5000 pg/μl
Maximum buffer concentration in sample	10 mM MgCl <sub>2</sub> 50 mM NaCl 10 mM NaOAc 10% ethanol 10% 2-propanol, 1 μg/μL glycogen	25 mM NaCl 25 mM KCl 3 mM EDTA 0.1 % NaN <sub>3</sub> 5 mM phosphate buffer 10% ethanol 10% 2-propanol
<b>Physical specifications</b>		
Analysis time	15 samples: < 25 min 96 samples: < 140 min	16 samples < 25 min 96 samples < 150 min
Samples per consumable	15	16
Sample volume required	1 μL	2 μL
Kit stability	4 months	6 months

<sup>1</sup> Signal/noise ratio >3 (single peak)

<sup>2</sup> Determined using the ladder as sample

<sup>3</sup> Sizing accuracy for analysis with electronic ladder: ±20 %

<sup>4</sup> DIN – DNA Integrity Number

DNA application notes and technical overviews, continued

Publication number	Description
5991-8191EN	Quality Control for Agilent SureSelectQXT WGS Library Preparation
5994-0127EN	Sample Quality Control in Agilent NGS Solutions
5994-0277EN	Performance Characteristics of the D1000 and High Sensitivity D1000 ScreenTape Assays for the 4150 TapeStation system
5994-0497EN	Performance Characteristics of the Genomic DNA ScreenTape Assay for the 4150 TapeStation System
5994-1390EN	Performance Characteristics of the Cell-Free DNA ScreenTape Assay

This list only provides an overview of selected DNA application notes.

Visit our website at [www.agilent.com/genomics/tapestation](http://www.agilent.com/genomics/tapestation) for a complete list of all available application and technical notes.

# TapeStation RNA ScreenTape and Reagents

The RNA ScreenTape provides a fully automated, efficient and reliable RNA analysis for RNA characterization and quality assessment. The RNA integrity number equivalent (RIN<sup>e</sup>) provides an instant and objective evaluation of total RNA degradation.



## RNA consumables and reagents

Part number	Description	Quantity
5067-5576	RNA ScreenTape For analysis of total RNA down to a sensitivity of 5 ng/μL. Includes 7 ScreenTape devices.	For 112 samples
5067-5577	RNA ScreenTape sample buffer For analysis of total RNA down to a sensitivity of 5 ng/μL. Includes 600 μL sample buffer. Order with 5067-5576.	For 112 samples
5067-5578	RNA ScreenTape ladder For the analysis of total RNA down to a sensitivity of 5 ng/μL. Includes 10 μL ladder. Order with 5067-5576 and 5067-5577.	
5067-5579	High Sensitivity RNA ScreenTape For the high sensitivity analysis of total RNA down to 100 pg/μL. Includes 7 ScreenTape devices.	For 112 samples
5067-5580	High Sensitivity RNA ScreenTape sample buffer For the high sensitivity analysis of total RNA down to 100 pg/μL. Includes 250 μL sample buffer. Order with 5067-5579.	For 112 samples
5067-5581	High Sensitivity RNA ScreenTape ladder For the high sensitivity analysis of total RNA down to 100 pg/μL. Includes 10 μL ladder. Order with 5067-5579 and 5067-5580.	

# TapeStation RNA ScreenTape and Reagents

## RNA specifications

Analytical specifications	RNA ScreenTape	High Sensitivity RNA ScreenTape
Analysis type	Eukaryotic or prokaryotic total RNA QC	Eukaryotic or prokaryotic total RNA QC
Sensitivity <sup>1</sup>	5 ng/μL	100 pg/μL
Quantitative precision	10 % CV	15 % CV
Quantitative accuracy	±20 %	±30 %
Quantitative range	25 – 500 ng/μL	500 – 10,000 pg/μL
Quality score <sup>2</sup>	RIN <sup>e</sup>	RIN <sup>e</sup>
RIN <sup>e</sup> functional range	25 – 500 ng/μL	1000 – 25,000 pg/μL
Maximum buffer concentration in sample	200 mM Tris 20 mM EDTA or 50 mM NaCl	10 mM Tris 1 mM EDTA
Physical specifications		
Analysis time	16 samples < 20 min 96 samples < 95 min	16 samples < 35 min 96 samples < 180 min
Samples per consumable	16	16
Sample volume required	1 μL	2 μL
Kit stability	4 months	4 months
Kit size	112 samples	112 samples

<sup>1</sup> Signal-to-noise >3 (single peak)

<sup>2</sup> RIN<sup>e</sup> – RNA integrity number equivalent

## RNA application notes

Publication number	Description
5990-9613EN	Comparison of RIN and RIN <sup>e</sup> algorithms for the Agilent 2100 Bioanalyzer and the Agilent 2200 TapeStation system
5991-0023EN	RNA quality control using the Agilent 2200 TapeStation system – Assessment of the RIN <sup>e</sup> quality metric
5991-4116EN	Quality Control for SureSelect Strand-Specific RNA Library Preparation Using the Agilent 2200 TapeStation system
5991-4971EN	A Systematic Approach to Optimize Real-Time Quantitative RT-qPCR Experiments with the Agilent 2200 TapeStation system
5991-8355EN	DV <sub>200</sub> Evaluation with RNA ScreenTape Assays

This list only provides an overview of selected RNA application notes.

Visit our website at [www.agilent.com/genomics/tapestation](http://www.agilent.com/genomics/tapestation) for a complete list of all available application and technical notes.

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