Agilent High Sensitivity D1000 ScreenTape System Quick Guide

System Components High Sensitivity D1000 ScreenTape Assay

The Agilent 2200 TapeStation system is a tape-based platform for simpler, faster and more reliable electrophoresis. It is made up of 3 elements:

- 2200 TapeStation System (G2964AA) or 2200 TapeStation Nucleic Acid System (G2965AA)
- High Sensitivity D1000 ScreenTape (5067-5584) with High Sensitivity D1000 Reagents (High Sensitivity D1000 Ladder, High Sensitivity D1000 Sample Buffer) (5067-5585)
- Agilent 2200 TapeStation Software

Kits

The High Sensitivity D1000 ScreenTape system is designed for analysing DNA molecules from 35 – 1000 bp.

Specifications

Analytical Specifications	High Sensitivity D1000 ScreenTape and Reagents
Sizing Range	35 – 1000 bp
Typical Resolution	35 – 300 bp: 15 % 300 – 1000 bp: 10 %
Sensitivity[1]	5 pg/µL
Sizing Precision	5 % CV
Sizing Accuracy[2]	±10 %
Quantitative Precision	15 % CV
Quantitative Accuracy[3]	±20 %
Quantitative Range	10 – 1000 pg/µL
Physical Specifications	
Analysis Time	16 samples: <20 min, 96 samples: ≈ 100 min
Samples per consumable	16
Sample volume required	2 µL
Kit stability	4 months
Kit size	112 samples

1 signal-to-noise >3 (single peak)
2 Sizing Accuracy for software ladder: ±20%
3 Measured against 2100 Bioanalyzer

Agilent Technologies

Storage Conditions

- Reagents vials: 2 – 8 °C
- The ScreenTape device: 2 – 8 °C (if you run less than 16 lanes, store used ScreenTape upright at 2 – 8 °C for a maximum of 2 weeks. Never freeze ScreenTape - any ScreenTape that is accidentally frozen should be discarded)

Kit Components

Part Number	Name	Color	Amount
5067-5584	High Sensitivity D1000 ScreenTape		7 ScreenTape
5067-5585	High Sensitivity D1000 Regents		2 vials
	• High Sensitivity D1000 Ladder		20 µL
	• High Sensitivity D1000 Sample Buffer		300 µL
5067-5587	High Sensitivity D1000 Ladder		1 vial
			20 µL

Additional Consumables required for the 2200 TapeStation instrument

- Loading tips, (5067-5152) / Loading tips, (5067-5153)
- Optical Tube 8x Strip, Box of 120, (401428) and Optical Cap 8x Strip, Box of 120, (401425) or -well Sample Plates, Pack of 10 plates (5067-5150) and -well Plate Foil Seal, Pack of 100 foils (5067-5154)
- Vortex mixer (See note below)

Additional Material Required (Not Supplied)

- Volumetric pipette
- Centrifuge
- Heating block or PCR machine

NOTE

Mixing recommendations

TapeStation instruments are supplied with an optional IKA MS3 vortexer which includes a 96 well plate adaptor suitable for both 96 well PCR plates and 8 way strips.

Safety Information

WARNING

Toxic agents

The handling of solvents, samples and reagents can hold health and safety risks.

- ➔ When using/handling the ScreenTape and working with these substances observe appropriate safety procedures (for example by wearing goggles, safety gloves and protective clothing).
- ➔ Always follow good laboratory practices and adhere to the guidelines established in your laboratory.
- ➔ Refer to product material safety datasheets for further information.
- ➔ The volume of substances should be reduced to the minimum required for the analysis.

CAUTION Damage to the 2200 TapeStation instrument

➔ Use only the recommended consumables and reagents with the 2200 TapeStation system.

General Information on Working with DNA

NOTE

- For best results ensure that all reagents are allowed to equilibrate to room temperature for 30 min prior to use.
- When pipetting Sample Buffer, ensure that excess buffer droplets are removed from the tip before transfer to the sample tubes. Care must be taken due to the viscosity of Sample Buffer.
- When pipetting small volumes ensure that no sample remains within the tip.
- When adding sample buffer to sample, please ensure that they are mixed correctly. To achieve this, gently mix several times with additional pipetting, then cap the tubes, vortex mix using IKA vortexer and adaptor at 2000 rpm for 1 min.
- Briefly centrifuge to collect the contents at the base of the tubes.
- *Improper mixing can lead to quantification errors.*

Essential Measurement Practices

Environmental conditions	• Optimal operating temperature: 23 °C (73.4 F) • Ambient operating temperature: 17 - 37 °C (62.6 - 98.6 °F))

Steps before use on the TapeStation	• Equilibrate each vial to room temperature. • Vortex mix each vial and briefly spin. • 'Flick' ScreenTape to eliminate bubbles in the separation channel, which could interfere with sample loading.
Steps during sample preparation	• Keep reagents at room temperature during sample preparation.
Storage after use on the TapeStation	• Store all reagent vials and ScreenTape at 2 – 8 °C • Never store reagents and ScreenTape at room temperature or below 0 °C. • If you run less than 16 lanes, store used ScreenTape upright at 2 – 8 °C for maximum of 2 weeks.

Pipette carefully	• Always pipette reagents against the side of the sample tube. • If using a standard pipette ensure that no residual material is left on the outside of the tip.
Mix properly after each pipetting step	• Mix = Vortex the PCR tubes or 96 well plate using Agilent approved IKA vortexer and adaptor at 2000 rpm for 1 min. • Spin = Move the samples to the bottom of the tubes/wells by pulsing in a centrifuge.

Agilent High Sensitivity D1000 ScreenTape System Quick Guide

Prepare TapeStation

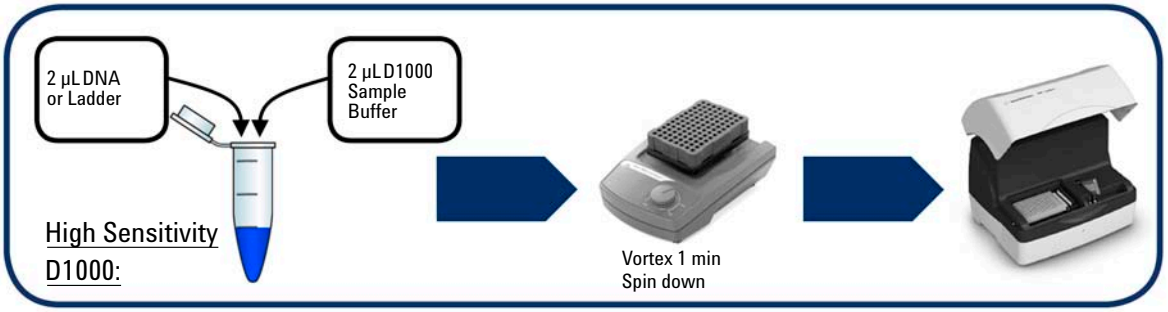
Parts required	p/n	Description
	5067-5584	High Sensitivity D1000 ScreenTape

1 Launch the Agilent 2200 TapeStation software.
2 Load High Sensitivity D1000 ScreenTape and loading tips into the 2200 TapeStation.

Sample Preparation High Sensitivity D1000 ScreenTape Assay

Parts required	p/n	Description
	5067-5585	High Sensitivity D1000 Reagents (High Sensitivity D1000 Ladder, High Sensitivity D1000 Sample Buffer)

1 Allow reagents to equilibrate at room temperature for 30 min
2 Vortex mix before use
3 If running ladder, add 2 µL High Sensitivity D1000 Sample Buffer (●) to 2 µL High Sensitivity D1000 Ladder (●)
4 Add 2 µL High Sensitivity D1000 Sample Buffer (●) to 2 µL DNA sample
5 Vortex using IKA vortexer and adaptor at 2000 rpm for 1 min
6 Spin down to position the sample at the bottom of the tube.



Sample Analysis

1 Load samples into the 2200 TapeStation.
2 Select the required samples on the controller software.
3 Click **Start** and specify a filename with which to save your results.

Limited Use Label License

Some products within this system contain SYBR® Green I, which is licensed from Molecular Probes Inc. for use in research and development only. SYBR® is a registered trademark of Molecular Probes, Inc.

Technical Support

For technical support, please visit www.agilent.com/genomics/contact

Further Information

Visit Agilent Technologies` web site. It offers useful information, support and current developments about the products and technology: www.agilent.com/genomics/tapestation

G2964-90131

Part Number: G2964-90131 Rev. B
Edition 10/2013
Printed in Germany

Agilent Technologies
Hewlett-Packard-Straße 8
76337 Waldbronn, Germany