Agilent ScreenPlex System Quick Guide

Assay Principles

The Agilent 2200 TapeStation system is a tape-based platform for simpler, faster and more reliable sample electrophoresis.

The system is made up of three elements:

- 2200 TapeStation Screenplex System (p/n G2966AA)
- ScreenTape DS12, 7 /box (p/n 5067-5373) with ScreenTape DS12 Reagents (DS12 Ladder & DS12 Loading Buffer) (p/n 5067-5374)
- Software package (ScreenPlex Software)

After extracted samples have been amplified with the appropriate Seeplex ACE kit (Seegene Inc.) and placed in the 2200 TapeStation with ScreenTape DS12, the system will load, separate, image, analyse and present the results.

Assay Kits

ScreenTape DS12, 7 /box (p/n 5067-5373) carries out electrophoretic separation of double stranded DNA species between 100 base pairs (bp) to 1000 bp. The system detects fluorescently stained double stranded DNA products between the range 1 – 30 ng per band and for a maximum concentration for one test sample of 75 ng. The sizing reproducibility for the same double stranded DNA species is within ±10 %.

Agilent Technologies

Essential Measurement Practices

Required tips and tubes for the TapeStation	• Optical Cap 8x Strip, Box of 120, 0.2 mL (p/n 401425) and Optical Tube 8x Strip, Box of 120, 0.2 mL (p/n 401428) • Loading tips, 1 x384 (p/n 5067-5153) or Loading tips, 10 x384 (p/n 5067-5152)

Steps before use on the TapeStation	• Equilibrate each vial to room temperature. • Vortex mix each vial and briefly spin.
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 tape 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 on half-speed for 5 s. • Spin = Move the samples to the bottom of the tubes/wells by pulsing in a centrifuge.

Storage Conditions

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

Agilent ScreenTape DS12 and Reagents

5067-5373	ScreenTape DS12		7 ScreenTape
5067-5374	ScreenTape DS12 Reagents • DS12 Ladder • DS12 Loading Buffer		1 vial 150 µL 800 µL

Additional Consumables required for the 2200 TapeStation

- Loading tips, 10 x384 (p/n 5067-5152) / Loading tips, 1 x384 (p/n 5067-5153)
- Optical Tube 8x Strip, Box of 120, 0.2 mL (p/n 401428) and Optical Cap 8x Strip, Box of 120, 0.2 mL (p/n 401425) or 96 -well Sample Plates, Pack of 10 plates (p/n 5067-5150) and 96 -well Plate Foil Seal, Pack of 100 foils (p/n 5067-5154)

Additional Material Required (Not Supplied)

- Volumetric pipette
- Vortex mixer
- Micro-centrifuge
- Latest TestKitSuite.xml from Seegene Inc.

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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

- ➔ Use only the recommended tips, tubes and plates within the 2200 TapeStation instrument.

Sample Preparation

1 Prepare Ladder

   a Aliquot a minimum of 3 µL DS12 Ladder ● into the first tube/well.

2 Prepare sample

   a Mix 6 µL DS12 loading buffer ○ with 2 µL DNA sample by vortex for 5 s. Spin down to position the sample at the bottom of the tube/well.

Setting up the Station

1 Launch the Agilent 2200 TapeStation software.

NOTE

The TapeStation software will not launch without the TestKitSuite.xml file. This file must be obtained from the PCR Test Kit manufacturer.

2 Load the samples, ScreenTape DS12 and loading tips into the 2200 TapeStation.

3 Select the ladder, required sample locations and test(s) on the TapeStation software.

4 Click **Start** and specify a filename with which to save your results.

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Technical Support

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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

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