PRODUCT INFORMATION SHEET

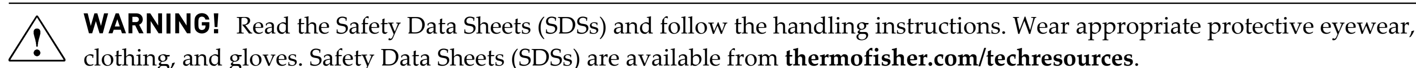
applied biosystems

DS-32 Matrix Standard Kit (Dye Set F) for 3100/3100-Avant™, 3130/3130*xl*, and 3500/3500xL Genetic Analyzers

Catalog Number 4345831

Pub. No. 4362855 **Rev.** C

Cat. no.	Description	Storage conditions
4345831	DS-32 Matrix Standard Kit (Dye Set F); one tube of matrix standard (~8 spectral calibration runs)	Store at 2–8°C, protected from light. DO NOT FREEZE. The kit is stable for 1 year when stored at 2–8°C.



WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from **thermofisher.com/techresources**.

Product description

The DS-32 Matrix Standard Kit (Dye Set F) consists of one tube of matrix standard. The tube contains a mixture of four DNA fragments of specific sizes, each labeled with one of the following fluorescent dyes: 5-FAM™, JOE™, NED™, or ROX™. The matrix standard is diluted in 1X TE buffer.

Use the kit to perform four-dye (Dye Set F) spectral calibrations on the 3100/3100-Avant™, 3130/3130*xl*, and 3500/3500xL Genetic Analyzers. A spectral calibration generates a multicomponent matrix file to compensate for dye spectral overlap that occurs between the dye colors on the instrument array. When setting up the spectral calibration run in the instrument's Data Collection Software, select Dye Set F.

Note: For more information on matrix standards, refer to the instrument or software user guide.

Precautions for use

- If you change the array or polymer type, use this matrix standard for the Dye Set F spectral calibration run to create a new multicomponent matrix file.
- Follow the protocols determined for your specific application and instrument.
- Do not prepare the matrix standard more than 2 hours in advance.
- Do not add size standard to the matrix standard.
- **IMPORTANT!** Discard any unused reagent that has been diluted in Hi-Di™ Formamide.

Instructions for use: 3100/3100-Avant™ and 3130/3130*xl* instruments

1. Vortex the matrix standard tube to thoroughly mix the contents, then spin briefly in a microcentrifuge.
2. Combine the following in a microcentrifuge tube:

Component	Volume	
	36-cm array	50-cm array
Matrix standard	10.0 µL	5.0 µL
Hi-Di™ Formamide (Cat. no. 4311320 or 4440753)	190.0 µL	195.0 µL

3. Cap the tube, vortex thoroughly, then spin briefly in a microcentrifuge.
4. Dispense 10 µL of the mixture into a 96-well microtiter plate, or dispense 5 µL into a 384-well microtiter plate. For detailed plate layouts, refer to the instrument user guide.
5. Tightly seal the plate.
6. Using a thermal cycler, denature the DNA fragments: Heat at 95°C for 5 minutes, then ramp to 4°C for ≥2 minutes.

   Note: For convenience, we recommend using a thermal cycler. However, if a thermal cycler is not available: After completing step 3, heat the mixture at 95°C for 5 minutes to denature the DNA fragments, immediately chill on ice for ≥2 minutes, then dispense into a plate as described in step 4.
7. Centrifuge the plate to remove bubbles and bring the mixture to the well bottoms.
8. For information on running and analyzing the samples, refer to the instrument or software user guide.

Instructions for use: 3500/3500xL instruments

1. Vortex the matrix standard tube to thoroughly mix the contents, then spin briefly in a microcentrifuge.
2. Combine the following in a microcentrifuge tube:

Component	Volume	
	36-cm array	50-cm array
Matrix standard	4.0 µL	4.0 µL
Hi-Di™ Formamide (Cat. no. 4311320 or 4440753)	246.0 µL	246.0 µL

3. Cap the tube, vortex thoroughly, then spin briefly in a microcentrifuge.
4. Dispense 10 µL of the mixture into a 96-well microtiter plate, or dispense 5 µL into a 384-well microtiter plate. For detailed plate layouts, refer to the instrument user guide.
5. Tightly seal the plate.
6. Using a thermal cycler, denature the DNA fragments: Heat at 95°C for 5 minutes, then ramp to 4°C for ≥2 minutes.

   Note: For convenience, we recommend using a thermal cycler. However, if a thermal cycler is not available: After completing step 3, heat the mixture at 95°C for 5 minutes to denature the DNA fragments, immediately chill on ice for ≥2 minutes, then dispense into a plate as described in step 4.
7. Centrifuge the plate to remove bubbles and bring the mixture to the well bottoms.
8. For information on running and analyzing the samples, refer to the instrument or software user guide.

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