


# DS-33 Matrix Standard Kit (Dye Set G5) for 3100/3100-Avant™, 3130/3130xL, and 3500/3500xL Genetic Analyzers and the 3730/3730xL DNA Analyzers

Catalog Number 4345833

Pub. No. 4362884 Rev. C

Cat. no.	Description	Storage conditions
4345833	DS-33 Matrix Standard Kit (Dye Set G5); 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](http://thermofisher.com/techresources).

## Product description

The DS-33 Matrix Standard Kit (Dye Set G5) consists of one tube of matrix standard. The tube contains a mixture of five DNA fragments of specific sizes, each labeled with one of the following fluorescent dyes: 6-FAM™, LIZ™, NED™, PET®, or VIC™. The matrix standard is diluted in 1X TE buffer.

Use the kit to perform five-dye (Dye Set G5) spectral calibrations on the 3100/3100-Avant™, 3130/3130xL, and 3500/3500xL Genetic Analyzers and the 3730/3730xL DNA 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 G5.

**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 G5 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 3130/3130x/ 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	3.0 µL	3.0 µL
Hi-Di™ Formamide (Cat. no. 4311320 or 4440753 )	297.0 µL	297.0 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: 3730/3730xl 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	
	G5 matrix	G5-RCT matrix
Matrix standard	7.0 µL	13.0 µL
Hi-Di™ Formamide [Cat. no. 4311320 or 4440753 ]	993.0 µL	987.0 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.

## Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at [www.lifetechnologies.com/termsandconditions](http://www.lifetechnologies.com/termsandconditions). If you have any questions, please contact Life Technologies at [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support).

The information in this guide is subject to change without notice.

### DISCLAIMER

TO THE EXTENT ALLOWED BY LAW, LIFE TECHNOLOGIES AND/OR ITS AFFILIATE(S) WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING YOUR USE OF IT.

Limited Use Label License No. 358: Research Use Only: Notice to Purchaser: The purchase of this product conveys to the purchaser the limited, non-transferable right to use the purchased amount of the product only to perform internal research for the sole benefit of the purchaser. No right to resell this product or any of its components is conveyed expressly, by implication, or by estoppel. This product is for internal research purposes only and is not for use in commercial applications of any kind, including, without limitation, quality control and commercial services such as reporting the results of purchaser's activities for a fee or other form of consideration. For information on obtaining additional rights, please contact [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com) or Out Licensing, Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, California 92008.

Limited Use Label License No. 481: Sequencing or Fragment Analysis Intellectual Property: Notice to Purchaser: This product is optimized for use in the DNA sequencing or fragment analysis methods covered by patents owned and/or controlled by Life Technologies Corporation ("LTC"). LTC does not convey any right or license under these patents, whether expressly, by implication, by estoppels, or otherwise, to the purchaser by the purchase of this product to use the DNA sequencing or fragment analysis methods. Notwithstanding the foregoing, a limited license to use the DNA sequencing or fragment analysis methods covered by such patents can be obtained for certain research and development activities (a) through the purchase of certain LTC reagents when such reagents are used in conjunction with an authorized LTC instrument, or (b) directly from LTC. For information on obtaining additional rights to practice the DNA sequencing or fragment analysis methods, please contact [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com) or Out Licensing, Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, California 92008.

©2015 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified.

For support visit [thermofisher.com/techresources](http://thermofisher.com/techresources) or email [techsupport@lifetech.com](mailto:techsupport@lifetech.com)

lifetechnologies.com