


DS-31 Matrix Standard Kit (Dye Set D with VIC™ dye)

SeqStudio™, 3500, 3730xl, and 3130 series instruments

Catalog Number 4345829

Pub. No. 4362883 Rev. B

 **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/support.

Product description

The DS-31 Matrix Standard Kit (Dye Set D with VIC™ dye) is used to perform spectral calibrations when analyzing DNA fragments labeled with 6-FAM™, VIC™, NED™, and ROX™ dyes. (The ROX™ dye is used to label the size standard.) The matrix standard contains four DNA fragments. Each fragment is labeled with a different dye from the dye set.

For more information on spectral calibration, see the *DNA Fragment Analysis by Capillary Electrophoresis User Guide* (Pub. No. 4474504).

Contents and storage

Contents	Amount	Storage
DS-31 Matrix Standard in TE buffer	1 tube	Store at 2–8°C, protected from light. ^[1] Do not freeze.

^[1] The kit is stable for 1 year when stored at 2–8°C.

Guidelines for use

- For more information on the use of matrix standards, see the instrument user guide or getting started guide.
- To prepare the matrix standard dilution, combine the appropriate volumes of matrix standard and Hi-Di™ Formamide (Cat. No. 4311320). Dilution volumes vary depending on the instrument.
- Use the matrix standard within 2 hours of preparation.
- Do not add size standard to the matrix standard.
- Discard any unused reagent that has been diluted in Hi-Di™ Formamide.

Prepare the standard

1. Vortex the matrix standard tube for 5–10 seconds to mix, then centrifuge for 3–5 seconds to bring the mixture to the bottom of the tube and eliminate air bubbles.
2. Combine the volumes of matrix standard and Hi-Di™ Formamide (Cat. No. 4311320) appropriate for the instrument. See “Component volumes and well location for the prepared standard” on page 2.
3. Vortex for 5–10 seconds, then centrifuge for 3–5 seconds.
4. Dispense 10 µL of the prepared standard into the appropriate wells of a 96-well plate. See “Component volumes and well location for the prepared standard” on page 2.
5. Cover the plate with adhesive film, then centrifuge for 3–5 seconds.
6. Denature the DNA fragments:
 - a. Incubate the mixture at 95°C for 5 minutes.
 - b. Incubate the mixture at 4°C, or on ice, for ≥2 minutes.
7. Remove the adhesive film, then cover the plate with a 96-well septa (Cat. No. 4315933).
8. Centrifuge for 3–5 seconds.
9. Assemble the plate with the retainer and base, then load on the instrument.
10. Immediately perform the spectral calibration.

See the instrument user guide for specifics on setting up the run.

Component volumes and well location for the prepared standard

Table 1 SeqStudio™ Genetic Analyzer

Component	Volume	Well location for the prepared standard
	4-capillary array	
DS-31 Matrix Standard	1 µL	Dispense 10 µL of the prepared standard into wells of a 96-well plate: 4 wells (for example, A1–D1)
Hi-Di™ Formamide	49 µL	
Total volume	50 µL	

Table 2 3500/3500xL Genetic Analyzer

Component	Volume ^[1]		Well location for the prepared standard
	8-capillary array	24-capillary array	
DS-31 Matrix Standard	2 µL	5 µL	Data Collection Software v3 and later: Dispense 10 µL of the prepared standard into wells of a 96-well plate: <ul style="list-style-type: none"> • 8-capillary array—8 wells (for example, A1–H1) • 24-capillary array—24 wells (for example, A1–H3, A4–H6, A7–H9, or A10–H12) Note: If you place the standard in wells that do not correspond to injection position 1, specify the starting well position in the software. Data Collection Software v1, v1.1, and v2: Dispense 10 µL of the prepared standard into wells of a 96-well plate: <ul style="list-style-type: none"> • 8-capillary array—8 wells: A1–H1 • 24-capillary array—24 wells: A1–H3
Hi-Di™ Formamide	98 µL	245 µL	
Total volume	100 µL	250 µL	

^[1] For both capillary arrays: Create a custom four-dye set: Select the **AnyDye** dye set template, then deselect the Purple and Orange dye checkboxes.

Table 3 3730xL DNA Analyzer with 3730xL Data Collection Software 5 or later

Component	Volume	Well location for the prepared standard
	48-capillary array 96-capillary array	
DS-31 Matrix Standard	7 µL	Dispense 10 µL of the prepared standard into wells of a 96-well plate: <ul style="list-style-type: none"> • 48-capillary array—48 wells (odd columns only): A1–H1, A3–H3, A5–H5, A7–H7, A9–H9, A11–H11 • 96-capillary array—96 wells
Hi-Di™ Formamide	993 µL	
Total volume	1,000 µL	

Table 4 3130/3130xL Genetic Analyzer

Component	Volume		Well location for the prepared standard
	36-cm array	50-cm array	
DS-31 Matrix Standard	10 µL	5 µL	Dispense 10 µL of the prepared standard into wells of a 96-well plate: <ul style="list-style-type: none"> • 16-capillary array—16 wells: A1–H2 • 4-capillary array—4 wells: A1–D1
Hi-Di™ Formamide	190 µL	195 µL	
Total volume	200 µL	200 µL	

Limited product warranty

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Revision history: Pub. No. 4362883

Revision	Date	Description
B	10 April 2020	Add the SeqStudio™ Genetic Analyzer, 3500, 3730xl, and 3130 series instruments. Remove the 3700 series instruments. Change the manufacturing address to Vilnius. Update format and licensing.
A	08 December 2004	New document.

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