DS-36 Matrix Standard Kit (Dye Set J6)

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

Catalog Number 4425042

Pub. No. 4426042 Rev. D

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-36 Matrix Standard Kit (Dye Set J6) is used to perform spectral calibrations when analyzing DNA fragments labeled with 6-FAM™, VIC™, NED™, SID™, TAZ™, and LIZ™ dyes. (The LIZ™ dye is used to label the size standard.) The matrix standard contains six 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-36 Matrix Standard in 1X TE buffer	1 tube, 112 µL	Store at 2–8°C, protected from light.[1] Do not freeze.

[1] See packaging for the expiration date. Do not use expired product.

Required materials not supplied

Item		Cat. No.
Hi-Di™ Formamide		4311320
MicroAmp™ Fast Optical 96-Well Reaction Plate, 0.1 mL		4346907
MicroAmp™ Optical 96-Well Reaction Plate		N8010560
MicroAmp™ Optical 384-Well Reaction Plate		4343370
Septa		
SeqStudio™ Flex and 3500 series	8-Strip Septa 3500/Flex Series (Qty 24)	4410701
	96-Well Septa 3500/Flex Series	4412614
	384-Well Septa 3500/Flex Series	4412520
SeqStudio™	Septa for SeqStudio™ Genetic Analyzer, 96 well	A35641
3730 series	Plate Septa, 96 well	4315933
	Plate Septa, 384 well	4315934
3130 series	Plate Septa, 96 well	4315933

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 and eliminate air bubbles.
2. Combine the volumes of matrix standard and Hi-Di™ Formamide appropriate for the instrument. See “Component volumes and well locations for the prepared standard” on page 2.
3. Vortex for 5–10 seconds, then centrifuge for 3–5 seconds.
4. Dispense the prepared standard into the appropriate wells of a reaction plate. See “Component volumes and well locations 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 septa.
8. Centrifuge for 3–5 seconds.
9. Assemble the plate with the retainer and base, then load on the instrument.

   Note: The SeqStudio™ Genetic Analyzer does not require a retainer and base.
10. Immediately perform the spectral calibration.

For information on setting up the run, see the instrument user guide.

Component volumes and well locations for the prepared standard

Table 1 SeqStudio™ Flex Series Genetic Analyzer

Component	Volume		Well location for the prepared standard	
	8-capillary array	24-capillary array	96-well plate	384-well plate
DS-36 Matrix Standard	2 µL	6 µL	Dispense 10 µL of the prepared standard into wells of a 96-well plate: • **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)	Dispense 5 µL of the prepared standard into wells of a 384-well plate: **24-capillary array**—24 wells (for example, A1, A3, A5; C1, C3, C5; E1, E3, E5; G1, G3, G5; I1, I3, I5; K1, K3, K5; M1, M3, M5; O1, O3, O5)
Hi-Di™ Formamide	98 µL	294 µL		
Total volume	**100 µL**	**300 µL**		

Table 2 SeqStudio™ Genetic Analyzer

Component	Volume	Well location for the prepared standard
	4-capillary array	
DS-36 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 3 3500/3500xL Genetic Analyzer

Component	Volume		Well location for the prepared standard
	8-capillary array	24-capillary array	
DS-36 Matrix Standard	6 µL	6 µL	**Data Collection Software v3 and later:** Dispense 10 µL of the prepared standard into wells of a 96-well plate: • **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: • **8-capillary array**—8 wells: A1–H1 • **24-capillary array**—24 wells: A1–H3
Hi-Di™ Formamide	294 µL	294 µL	
Total volume	**300 µL**	**300 µL**	

Table 4 3730/3730xl DNA Analyzer

Component	Volume		Well location for the prepared standard
	48-capillary array	96-capillary array	
DS-36 Matrix Standard	10 µL	10 µL	Dispense 10 µL of the prepared standard into wells of a 96-well plate: • **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	490 µL	490 µL	
Total volume	**500 µL**	**500 µL**	

Table 5 3130/3130*x*/ Genetic Analyzer

Component	Volume		Well location for the prepared standard
	36-cm array	50-cm array	
DS-36 Matrix Standard	3 µL	2 µL	Dispense 10 µL of the prepared standard into wells of a 96-well plate: • **16-capillary array**—16 wells: A1–H2 • **4-capillary array**—4 wells: A1–D1
Hi-Di™ Formamide	297 µL	398 µL	
Total volume	**300 µL**	**400 µL**	

Limited product warranty

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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

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

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Revision history: Pub. No. 4426042

Revision	Date	Description
D	31 January 2022	Added information for the SeqStudio™ Flex Series Genetic Analyzer. Added required materials table.
C	13 October 2020	Removed 3730/3730xl Data Collection Software v4 paragraph about selecting J6-RCT to perform fragment analysis in applications with a high dynamic range. Made minor updates for consistency with other matrix standards product information sheets.
B	18 October 2019	Added new formulation for the SeqStudio™ Genetic Analyzer. For 3730/3730xl Data Collection Software v4, changed the dye set from G5-RCT to J6-RCT. Added vortex and centrifuge times. Added information for Data Collection Software v1, v1.1, and v2. Changed the manufacturing address to Vilnius. Updated format and licensing.
A	July 2012	New document.