

CarrierMax™ A5D Matrix Standard Kit

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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 CarrierMax™ A5D Matrix Standard Kit is used to perform spectral calibrations when analyzing DNA fragments labeled with the 6-FAM™ dye, HEX™ dye, TAMRA™ dye, ROX™ dye, and AF633™ dye. The matrix standard contains five DNA fragments, each size 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
CarrierMax™ A5D Matrix Standard Kit	1 tube, minimum of 8 runs	-25°C to -15°C, protected from light. ^[1]

^[1] The kit is stable for one year when stored at -25°C to -15°C. Do not freeze, then thaw, more than 5 times.

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 3–5 seconds to mix, then centrifuge 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”.
3. Vortex for 3–5 seconds, then centrifuge the tube for 1 minute to bring the contents to the bottom of the tube and eliminate air bubbles.
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”.
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 3 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 the plate for 1 minute to bring the contents to the bottom of the wells and eliminate air bubbles.
9. (3500/3500xL only) Assemble the plate with the retainer and base, then load on the instrument.
10. Immediately perform the spectral calibration with the E5 run module.

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	
CarrierMax™ A5D Matrix Standard	2.5 µL	Dispense 10 µL of the prepared standard into wells of a 96-well plate: 4 wells (for example, A1–D1)
Hi-Di™ Formamide	47.5 µL	
Total volume	50 µL	

Table 2 3500/3500xL Genetic Analyzer

Component	Volume		Well location for the prepared standard
	8-capillary array	24-capillary array	
CarrierMax™ A5D Matrix Standard	10 µL	15 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.
Hi-Di™ Formamide	190 µL	285 µL	
Total volume	200 µL	300 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	Date	Description
A.0	2 April 2020	New document for the CarrierMax™ A5D Matrix Standard Kit.

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