applied biosystems

GeneScan™ 600 LIZ™ Size Standard v2.0

Catalog Number 4408399

Pub. No. 4425787 **Rev.** B

Cat. no.	Description	Quantity/volume	Storage conditions
4408399	GeneScan™ 600 LIZ™ Size Standard v2.0	2 tubes, 200 µL/tube (400 reactions/tube; 800 reactions total) [1]	Store at 2–8°C, protected from light. DO NOT FREEZE. Refer to the expiration date on the label. Do not use expired product.

[1] The total number of reactions may vary, depending on your specific application. The number of uses specified is for a typical workflow, as described in "Instructions for use".

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 GeneScan™ 600 LIZ™ Size Standard v2.0 is an internal lane size standard developed for use with Applied Biosystems™ fluorescence-based DNA electrophoresis systems. Using an internal lane size standard enables automated data analysis, and is essential for achieving high run-to-run precision in sizing DNA fragments by electrophoresis.

The GeneScan™ 600 LIZ™ Size Standard v2.0 is designed to size DNA fragments in the 20–600 nucleotide range and provides 36 single-stranded labeled fragments of: 20, 40, 60, 80, 100, 114, 120, 140, 160, 180, 200, 214, 220, 240, 250, 260, 280, 300, 314, 320, 340, 360, 380, 400, 414, 420, 440, 460, 480, 500, 514, 520, 540, 560, 580, and 600 nucleotides.

The sizing curve generated from the fragments makes the GeneScan™ 600 LIZ™ Size Standard v2.0 ideal for a variety of fragment analysis applications, such as microsatellites, fragment-length polymorphisms, and relative fluorescent quantitation. Each DNA fragment is labeled with the LIZ™ fluorophore, which results in a single peak when run under denaturing conditions. With the LIZ™ fluorophore as the size standard, you can run samples using five-dye or six-dye chemistry.

Precautions for use

- Follow the protocols determined for your specific application and instrument.
- Do not prepare the size 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.

ThermoFisher SCIENTIFIC

Instructions for use: 310, 3100/3100-Avant™, 3130/3130*xl*, and 3730/3730*xl* instruments

1. Mix the contents of each tube by vortexing, then centrifuge briefly to collect the liquid at the bottom of the tube.
2. Combine the following components in a microcentrifuge tube or in a 96-well microtiter plate. The table provides a typical loading cocktail for a single well.

   Note: We recommend the DNA sample (PCR product) and size standard ratios listed below only as a starting point. If needed, optimize these ratios according to the experimental requirements.

Component	Volume		
	310 Genetic Analyzers	3100/3100-Avant™ and 3130/3130*xl* Genetic Analyzers	3730/3730*xl* DNA Analyzers
DNA sample	0.5 µL	0.5 µL	0.5 µL
GeneScan™ 600 LIZ™ Size Standard v2.0	0.5 µL	0.5 µL	0.5 µL
Hi-Di™ Formamide (Cat. no. 4311320 or 4440753)	11.0 µL	9.0 µL	9.0 µL
Total volume per well	**12.0 µL**	**10.0 µL**	**10.0 µL**

3. Seal, vortex to mix, then briefly centrifuge the plate or tube.
4. Heat the reaction mix for 3 minutes at 95°C, then immediately chill on ice for ≥ 2 minutes.
5. If you prepared the reaction mix in a tube, transfer the appropriate volume (from step 2) of the denatured reaction mix into the wells of a 96-well microtiter plate.
6. Tightly seal the plate, then centrifuge the plate to remove bubbles and bring the mixture to the well bottoms.
7. For information on running and analyzing the size standards, refer to the instrument or software user guide.

Instructions for use: 3500/3500xL instruments

For the 3500/3500xL Genetic Analyzers, you can use the GeneScan™ 600 LIZ™ Size Standard v2.0 as a size standard and as an internal lane normalization standard. If you use it as a normalization standard, you must use the provided normalization definition file and collection of up to (and including) 400 base fragments.

1. Mix the contents of each tube by vortexing, then centrifuge briefly to collect the liquid at the bottom of the tube.
2. Combine the following components in a microcentrifuge tube or in a 96-well microtiter plate. The table provides a typical loading cocktail for a single well.

   Note: You can use the options provided below for a size standard or normalization standard. We recommend the DNA sample (PCR product) and size standard ratios listed below only as a starting point. If needed, optimize these ratios according to the experimental requirements.

Component	Volume		
	Option 1	Option 2	Option 3
DNA sample	0.5 µL	0.25 µL	1.0 µL
GeneScan™ 600 LIZ™ Size Standard v2.0	0.5 µL	0.5 µL	0.5 µL
Hi-Di™ Formamide (Cat. no. 4311320 or 4440753)	9.0 µL	9.25 µL	8.5 µL
Total volume per well	**10.0 µL**	**10.0 µL**	**10.0 µL**

3. Seal, vortex to mix, then briefly centrifuge the plate or tube.
4. Heat the reaction mix for 3 minutes at 95°C, then immediately chill on ice for ≥ 2 minutes.
5. If you prepared the reaction mix in a tube, transfer 10 µL of the denatured reaction mix into the wells of a 96-well microtiter plate.

6. Tightly seal the plate, then centrifuge the plate to remove bubbles and bring the mixture to the well bottoms.
7. For information on running and analyzing the size or normalization standards, 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**. If you have any questions, please contact Life Technologies at **www.lifetechnologies.com/support**.

For support visit **thermofisher.com/techresources** or email **techsupport@lifetech.com**

lifetechnologies.com

30 June 2015

ThermoFisher SCIENTIFIC