


GeneScan™ 600 LIZ™ Size Standard

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Cat. no.	Description	Quantity/volume	Storage conditions
4366589	GeneScan™ 600 LIZ™ Size Standard	2 tubes, 200 µL/tube (400 reactions/tube; 800 reactions total) ^[1]	Store at 2–8°C, protected from light. DO NOT FREEZE. The kit is stable for 1 year when stored at 2–8°C.

^[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 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 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 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.

Instructions for use: 310, 3100/3100-Avant™, 3130/3130xI, and 3730/3730xI 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 3130/3130xI Genetic Analyzers	3730/3730xI DNA Analyzers
DNA sample	0.5 µL	0.5 µL	0.5 µL
GeneScan™ 600 LIZ™ Size Standard	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.

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