

# GeneScan™ 1200 LIZ™ Size Standard

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

Catalog Number 4379950

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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](http://thermofisher.com/support).

## Product description

The GeneScan™ 1200 LIZ™ Size Standard is an internal size standard for use with Applied Biosystems™ fluorescence-based DNA electrophoresis systems. An internal size standard enables automated data analysis during electrophoresis and precise DNA fragment size comparisons between electrophoresis runs. The GeneScan™ 1200 LIZ™ Size Standard sizes DNA fragments in the 20- to 1,200-bp range and provides 68 single-stranded, dye-labeled fragments of 20, 30, 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, 600, 614, 620, 640, 660, 680, 700, 714, 720, 740, 760, 780, 800, 820, 840, 850, 860, 880, 900, 920, 940, 960, 980, 1,000, 1,020, 1,040, 1,060, 1,080, 1,100, 1,120, 1,160, and 1,200 bases. Each DNA fragment is labeled with the LIZ™ fluorophore, which results in a single peak when run under denaturing conditions.

This size standard is compatible with Dye Sets E5, G5, J6, and J6-T.

## Contents and storage

| Contents                          | Amount  | Storage   |
|-----------------------------------|---|---|
| GeneScan™ 1200 LIZ™ Size Standard | 2 × 200 µL<br>(~800 reactions) <sup>[1]</sup> | Store at 2–8°C, protected from light. Do not freeze. <sup>[2]</sup> |

<sup>[1]</sup> The total number of reactions may vary depending on the specific application. This number is based on the volumes specified in this document.

<sup>[2]</sup> See packaging for expiration date. Do not use expired product.

## Procedural guidelines

To optimize the analysis on capillary electrophoresis instruments, note the following:

- (3130 series only) For the best results, we recommend using a 50-cm capillary.
- Use the size standard within 2 hours of preparation.
- Fragment analysis primer peaks can often interfere with the detection of the 35-bp peak. If this occurs, copy the size standard definition and save it as a custom standard, then delete the 35-bp peak. Similarly, if the largest fragments are not collected with the run module that you are using, you can delete the largest fragments in a custom size standard definition.

## Prepare the sample

1. Thoroughly mix the contents of the tube, then briefly centrifuge.
2. Combine the following components for the number of reactions required.

| Component                           | Volume          |                |                |                |                |
|-------------------------------------|-----------------|----------------|----------------|----------------|----------------|
|                                     | SeqStudio™ Flex | SeqStudio™     | 3500 series    | 3730 series    | 3130 series    |
| DNA sample                          | 0.5 µL          | 0.5 µL         | 0.5 µL         | 0.5 µL         | 0.5 µL         |
| Size standard                       | 0.5 µL          | 0.5 µL         | 0.5 µL         | 0.5 µL         | 0.5 µL         |
| Hi-Di™ Formamide (Cat. No. 4311320) | 9.0 µL          | 9.0 µL         | 9.0 µL         | 9.0 µL         | 9.0 µL         |
| <b>Total volume per well</b>        | <b>10.0 µL</b>  | <b>10.0 µL</b> | <b>10.0 µL</b> | <b>10.0 µL</b> | <b>10.0 µL</b> |

**Note:** We recommend using the above ratios of DNA sample (PCR product) and size standard only as a starting point. Optimize these ratios as needed, based on your experimental results.

3. To denature the DNA fragments, incubate for 3 minutes at 95°C. Immediately place the mixture on ice for ≥2 minutes.

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

**Note:** Discard any unused reagent that has been diluted in Hi-Di™ Formamide.

## Limited product warranty

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**Revision history:** Pub. No. 4379957

| Revision | Date              | Description   |
|----------|-------------------|---|
| C        | 2 February 2022   | Added the SeqStudio™ Flex Series Genetic Analyzer and SeqStudio™ Genetic Analyzer. Removed the 3100 and 310 series instruments. Added dye set compatibility. Changed the manufacturing address to Vilnius. Made format, style, and legal updates. |
| B        | 10 September 2009 | Baseline for this revision history  |

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