

# GeneScan™ -500 LIZ® Size Standard



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Insert P/N 4363115 REV A  
Printed in USA

For Research Use Only.  
Not for use in diagnostic procedures.

GeneScan™ -500 LIZ® is an internal lane size standard developed for use with the Applied Biosystems fluorescence-based DNA electrophoresis systems. The use of an internal lane size standard enables automated data analysis and is also essential for achieving high run to run precision in sizing DNA fragments by electrophoresis. GeneScan™ -500 LIZ Size Standard is designed for sizing DNA fragments in the 35-500 bp range and provides 16 single-stranded labeled fragments of 35, 50, 75, 100, 139, 150, 160, 200, 250, 300, 340, 350, 400, 450, 490, and 500 bases. Each of the DNA fragments is labeled with a proprietary fluorophore, which results in a single peak when run under denaturing or native conditions.

Each kit contains two-200 µL tubes of the size standard and 1 tube of loading buffer. This is sufficient for 800 analyses when using the recommended loading amount of 0.5 µL. The kit may be stored up to six months at 2°C to 4°C. (Do not freeze).

## Directions for Use

### Sample Preparation

**WARNING! CHEMICAL HAZARD. Hi-Di™ Formamide.** Exposure causes eye, skin, and respiratory tract irritation. It is a possible developmental and birth defect hazard. Read the MSDS, and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

- 1) Before use, mix the contents of each tube thoroughly and centrifuge briefly to collect the liquid at the bottom of the tube. Typical loading cocktails are described below.

	377	310	3130 and 3100 Series Systems	3700	3730 Series Systems
Sample	0.4	0.5	0.5	0.5	0.5
Size Standard	0.4	0.5	0.25	0.5	0.5
Hi-Di™ Formamide	2.1	9.0	9.25	9.0	9.0
Loading Buffer	2.0	na	na	na	na
Loading volume	1.5	na	na	na	na

Note: Applied Biosystems highly recommends using the above ratios of DNA sample (PCR product) and size standard as a starting point only. Optimize these ratios if necessary, based on your experimental results.

The Hi-Di™ Formamide (4311320) is not included in the kit.

- 2) Heat the loading cocktail for 3 minutes at 95°C. Immediately chill on ice for a few minutes and load samples.

\*The 250 bp peak is sensitive to small temperature variations on capillary electrophoresis instruments. The 250 bp fragment should not be used when defining the size standard in GeneScan™ or GeneMapper® Software.

Also on capillary electrophoresis instruments, the 340 bp peak is subject to large temperature variations. Fragment analysis primer peaks can often interfere with the detection of the 35 bp peak. Optimize your analysis based on this information.

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