

MapMarker® Technical Bulletin

Next Generation in Single-Stranded Fluorescent DNA Sizing Standards

MapMarker® is a set of high-quality fluorescently labeled DNA fragments designed to provide consistent intensities and migration patterns for DNA sizing standards and are compatible with all fluorescently-based separation instrument systems. MapMarker® fragments are uniformly spaced to provide accurate base calling and precise sizing of samples.

Setting BioVentures Apart

BioVentures has always experienced success with our MapMarker® 1000, however recently the growth of this product has been explosive. There are several new areas in which we have found MapMarker® 1000 to be very valuable within the research community. These include: genotyping, RFLP, TILLING, T-RFLP and other areas that are now requiring the sizing of larger fragments.

The growth of MapMarker® 1000 for use with the T-RFLP method for community studies has been especially astounding. T-RFLP is a high-throughput, reproducible method that allows for the diversity analysis of bacteria in a community. When the amplified 16S rRNA product (usually 1200-1500bp) is digested, some of the products are larger than the typical length of 500 base pairs that one would find in most size standards. The MapMarker® 1000 has filled this need by providing excellent and accurate sizing up to the 1000 base pair range.

Our MapMarker® 400 and MapMarker® 500 have been used in many genotyping and forensic applications. The high band density make them an excellent choice for sizing fragments in the 70-500bp size range. BioVentures is pleased to offer a product, such as MapMarker®, that provides our customers with the opportunity to find the marker that best suits the needs of their specific study.

Advantages

Our MapMarker® boasts multiple advantages including:

1. High Quality

MapMarker® contains single-stranded DNA with a single bound fluorophore that gives single marker peaks over the entire size range. MapMarker® is evaluated for resolution, intensity and background on a capillary electrophoresis instrument using laser excitation. Each MapMarker® is free of extraneous peaks over the entire sizing range and is free of "pull-up" signals in other channels.

2. Flexibility

With MapMarker®, our customers are able to size larger sample fragments when necessary and eliminate the need to redesign primers in order to create amplification products smaller than 500bp.

3. Accuracy, Consistency, & Precision

MapMarker® 1000 consists of a large number of bands (23 bands) ranging in size from 50-1000bp. This allows for a very accurate sizing of sample bands. MapMarker® also creates a size curve that is linear, where the R² Value is equal to 1. (See Figure 2). The consistent migration of MapMarker® produces very precise sizing, run after run.

4. Compatibility

MapMarker® is compatible with many fluorescence-based instrument systems, as well as a wide variety of fluorescent dyes including: TAMRA, ROX, FAM, CY5.0 equivalent and more.

5. Technical Support

As a small company, BioVentures is well known for our friendly and complete customer service. We are happy to reach out to our customers with any questions or concerns that might arise.

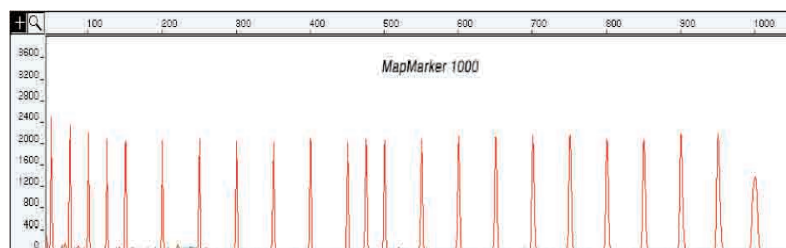


Figure 1: MapMarker® 1000 contains 23 discrete DNA fragments in size from 50 to 1000 base pairs. The fragments are 50, 75, 100, 125, 150, 200, 250, 300, 350, 400, 450, 475, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, and 1000 base pairs.

Custom Configurations

Custom configurations of MapMarker® are available in a size range of 30-2000bp. MapMarker® size ladders can also be brought to various concentrations depending on your specifications. Once your custom configuration is manufactured, it is tested for concentration via spectrophotometry, and for resolution and background on capillary electrophoresis using laser excitation. BioVentures Inc. custom ladders are economical due to cost reduction by incorporating only the necessary bands.

MapMarker® Products:

- MapMarker® 400
- MapMarker® 500
- MapMarker® 1000
- Custom Configurations

Each kit includes :

- 500µl Blue Dextran Tracking Dye
- 400µl MapMarker®

References

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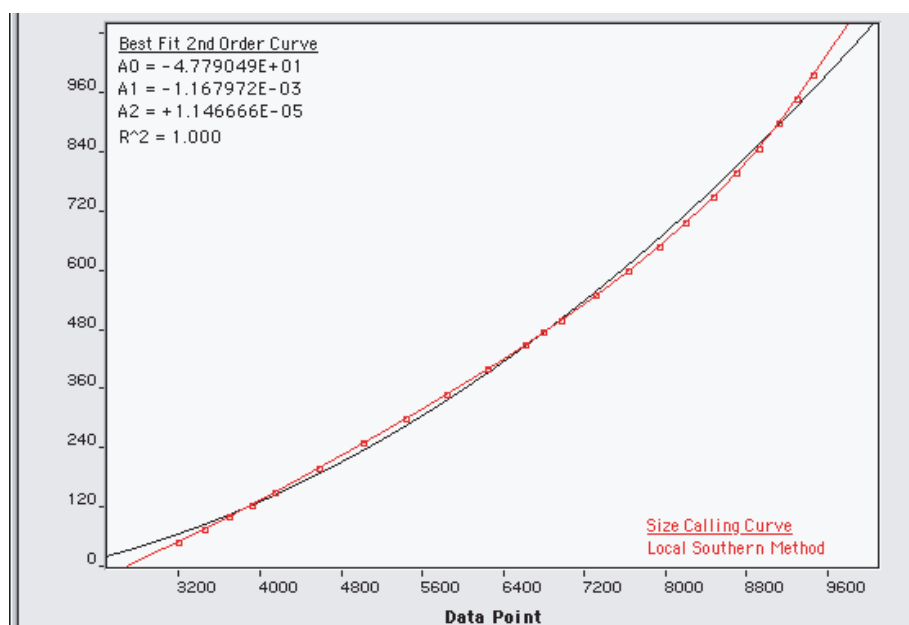


Figure 2: Size Curve for MapMarker® 1000. The red line represents the MapMarker® 1000 size standard, while the black curve represents the best fit curve. When R² is equal to 1.000, this is identified as the best possible outcome.

Ordering Information for

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