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ProductInformation

PCR 100 bp Low Ladder

Catalog Number **P1473**
Storage Temperature –20 °C

Product Description

The PCR 100 bp Low Ladder has been especially designed for size determination of PCR generated DNA fragments. The recommended agarose gel concentration is 2.0%. The ladder contains 10 bands, ranging from 100–1,000 bp in exact 100 bp spaced (ladder) recombinant repeats.

DNA Sizes: base pairs (bp)

1,000	500
900	400
800	300
700	200
600	100

The ladder is supplied as a solution in 10 mM Tris-HCl, pH 7.5-8.0, with 1.0 mM EDTA. One vial is sufficient for 75 applications.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage and Stability

This product is shipped at ambient temperature and storage at –20 °C is recommended.

Procedure

The following procedure may be used as a guideline. The ladder should be diluted with gel loading buffer to the desired loading concentration. Adjustments may be made for different well sizes and individual preferences.

Preparation of the PCR Ladder for electrophoresis:

5 µl PCR Ladder
5 µl water
2 µl Gel Loading Buffer (Catalog Number G2526)

The entire 12 µl of the prepared PCR Ladder solution was loaded on a 2.0% agarose submarine type minigel and run at 90 volts in 1× TBE buffer (Catalog Number T9525) until the bromophenol tracking dye reached the bottom of the gel. After staining for 15–20 minutes in 5 µg/ml ethidium bromide and destaining with water for 15–20 minutes, the resulting banding pattern was consistent with the indicated DNA sizes.

Notes:

1. Well Thickness: For best resolution of DNA bands, use only properly formed sample wells, ≤1 mm in thickness.
2. Salt Concentration: It is important to accurately match the salt concentration of the prepared PCR Ladder solution to that of the DNA being evaluated in order to obtain the best size determinations. One useful technique for very precise sizing of sample fragments, which eliminates concerns over matching salt concentrations, is to co-electrophorese the sample and the ladder in the same well. Ladder-only and sample-only lanes should be run to aid in interpretation of electrophoresis patterns.
3. Anomalies: The 100 bp ladder may show a double or triple-banding pattern in some types of polyacrylamide gels, particularly under higher run temperatures.

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