100 bp PCR Molecular Ruler

Catalog Number 170-8206

Contents	1 vial PCR Molecular Ruler, 200 µl supplied in TE (10 mM Tris-HCl, 1 mM EDTA, pH 8).
Quantity	DNA sufficient for 100 lanes when used at 2 µl per lane.
Concentration	200 µg/ml.
Shipping	The PCR Molecular Ruler is shipped at room temperature.
Size	30 bands: 100 bp–3,000 bp in exact 100 bp increments. Two visually distinct reference bands at 1 kb and 3 kb contain three times the concentration of material found in the other bands.
Storage	The PCR Molecular Ruler should be stored at 4 °C. The standard can be stored at -20 °C in aliquots for long term storage. Use only sterile pipet tips when removing aliquots. Introduction of nucleases will shorten shelf life.
Shelf life	The PCR Molecular Ruler is stable for 1 year when stored at 4 °C.
Use	The PCR Molecular Ruler can be resolved in 0.8%–2% standard agarose gels and polyacrylamide gels of 5%. Typically, 2 µl of the PCR Molecular Ruler should be loaded into each lane. This corresponds to approximately 400 ng of DNA per lane. It is necessary to add loading buffer to the standard prior to loading to insure correct results. Adjustments may be made to the loading volume for different well sizes and desired band intensity.
For best results	Load the smallest practical amount of sample DNA to yield the sharpest bands and most accurate results. Use only sterile solutions, pipet tips, and tubes. The DNA fragments in this product possess *Hind* III compatible cohesive ends.

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It is necessary to add loading buffer to the sample prior to loading to insure correct results. Any conventional sample loading buffer should work well. For your convenience we offer the following recipe:

10X Sample Loading Buffer*
20% Ficoll 400
0.1 M Na_2EDTA, pH 8.0
1% SDS
0.25% Bromophenol Blue
0.25% Xylene Cyanol

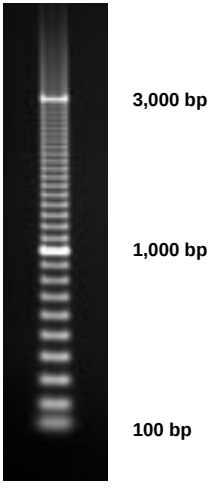

Fig. 1. 2 µl of standard was diluted to 10 µl in sample loading buffer and TE and loaded onto a 0.8% Molecular Biology Certified agarose (catalog number 162-0133) gel. The gel was run at 140 V for 2.5 hours in 1x TBE buffer. The gel was stained in 300 ml of 0.5 µg/ml EtBr for 15 minutes and destained in dH_2O for 30 minutes.

* Ausubel, F. M. *et al* , Current Protocols in Molecular Biology, Wiley Interscience Publishing, (1995), sec. 2.5.1.