BIO-RAD

100 bp Molecular Ruler

Catalog Number 170-8202

Contents	1 vial 100 bp Molecular Ruler, 250 µl supplied in TE (10 mM Tris-HCl, 1 mM EDTA, pH 8).
Quantity	DNA sufficient for 100 lanes at 2.5 µl per lane.
Concentration	100 µg/ml.
Shipping	The 100 bp Molecular Ruler is shipped at room temperature.
Size	10 bands: 100 bp–1,000 bp in exact 100 bp increments.
Storage	The 100 bp 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 100 bp Molecular Ruler is stable for 1 year when stored at 4 °C.
Use	The 100 bp Molecular Ruler can be resolved in standard agarose gels of 1.0–2.5%, AmpliSize® agarose gels up to 4% or in polyacrylamide gels up to 8%. Typically, 2.5 µl of the DNA standard should be loaded in each lane. It is necessary to add loading buffer to the standard prior to loading to ensure correct results. This loading volume translates into approximately 250 ng of DNA per lane. Adjustments may be made to the loading volume for different well sizes and desired band intensity.
Please note:	The 100 bp ruler may show a double or triple-banding pattern in polyacrylamide gels.
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 *Hin*d III - compatible cohesive ends.

It is necessary to add loading buffer to the sample prior to loading to ensure 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
0.1M Na_2EDTA, pH 8.0
1% SDS
0.25% Bromphenol Blue
0.25% Xylene Cyanol

Fig. 1. 2.5 µl of standard was diluted to 10 µl in sample loading buffer and TE and loaded onto a 2.5% AmpliSize agarose (catalog number 162-0144) gel. The gel was run at 140 V for 3 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.