BIO-RAD

1 kb Molecular Ruler

Catalog Number 170-8204

Contents	1 vial 1 kb Molecular Ruler, 200 µl supplied in TE (10 mM Tris-HCl, 1 mM EDTA, pH 8).
Quantity	DNA sufficient for 100 lanes at 2 µl per lane.
Concentration	200 µg/ml.
Shipping	The 1 kb Molecular Ruler is shipped at room temperature.
Size	15 bands: 1 kb–15 kb range in exact 1 kb increments. A visually distinct reference band at 5 kb contains three times the concentration of DNA found in other bands.
Storage	The 1 kb 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 1 kb Molecular Ruler is stable for 1 year when stored at 4 °C.
Use	The 1 kb Molecular Ruler can be resolved in agarose gels of up to 2%. Typically, 2 µl of the DNA standard should be loaded into each lane. This translates to approximately 400 ng of DNA per lane. It is necessary to add loading buffer to the standard prior to loading to ensure correct results. Adjustments may be made to 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 *Eco*RI-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

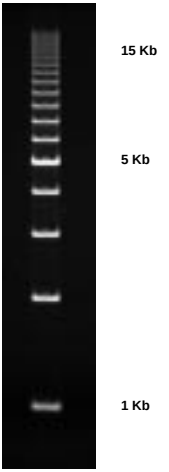

Fig. 1. 2 µl of standard was diluted to 10 µl in sample loading buffer and TE and loaded onto a 0.7% Molecular Biology Certified agarose (catalog number 162-0133) gel. The gel was run at 140 V for 2.5 hours in 1x TBE buffer. The gel was stained in 300 ml of 0.5 µg/ml EtBr for 15 minutes and destained in dH_2O for 30 minutes.

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