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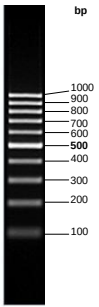
100 bp DNA Ladder (Ref. 31.006)

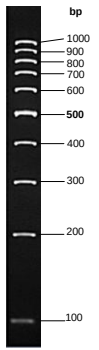
Concentration: 0.5 mg/ml (50 μg) **Store at -20ºC**

Description

The 100 bp DNA Ladder is prepared from plasmid DNA digested to completion with appropriate restriction enzymes to yield bands ranging from 100 bp to 1 kb, suitable for use as molecular weight standards for agarose and polyacrylamide gels. The ladder is composed to 10 chromatography-purified individual DNA fragments (in base pairs): 1000, 900, 800, 700, 600, **500**, 400, 300, 200 and 100. The 500 bp fragment has increased intensity to serve as a reference band.



100 bp DNA Ladder
0.5μg/lane
1.7% agarose gel
stained with ethidium bromide.



100 bp DNA Ladder
0.5μg/lane
5% polyacrylamide gel
stained with ethidium bromide.

Storage buffer (TE buffer)

10 mM Tris-HCl (pH 7.6), 1 mM EDTA

Storage temperature

Store at -20ºC. For frequent use divide in aliquots to avoid multiple freeze/thaw cycles, or store at 4ºC in the presence of loading buffer.

Protocol

1- Prepare loading mixture (for the 5 mm gel lane*****):

	Agarose Gels	Polyacrylamide Gels
• 100 bp DNA Ladder (0.5-1 µg)	1-2 µl	1 - 2 µl
• 5X Loading Dye	1 µl	0.5 µl
• Distilled water	3-2 µl	1 - 0 µl
Final volume	5 µl	2.5 µl

2- Mix gently

3- Do not heat

4- Load onto the gel

5- Visualise DNA by staining with ethidium bromide or with SYBR® Green I.

*****The mixture should be scaled up or down, depending on the width of the gel. Use 0.1-0.2 µg of DNA ladder/mm of lane.

The 100 bp DNA Ladder was not designed for precise quantification of DNA mass, but can be used for semi-quantification (see Table 1). For quantification, adjust the concentration of the sample to equalize it approximately with the amount of DNA in the nearest band of the ladder.

Table 1. Percentage and mass of individual fragments (for 0.5 µg 100 bp DNA Ladder)

Fragment	Size	%	mass (ng/0.5µg)
1	1000	9	45
2	900	9	45
3	800	9	45
4	700	9	45
5	600	9	45
6	**500**	**23**	**115**
7	400	8	40
8	300	8	40
9	200	8	40
10	100	8	40

Notice to users

Research and *in vitro* use only.