

CERTIFICATE OF ANALYSIS

**GeneRuler™
100bp DNA Ladder**

#SM0241 50µg (for 100 applications)

Lot:

Concentration: 0.5µg/µl
Supplied with: 1ml 6X Loading Dye Solution

Store at -20°C.

In total 2 vials.

Description

The GeneRuler™ 100bp DNA Ladder is designed for sizing and approximate quantification of wide range double-stranded DNA fragments on agarose and polyacrylamide gels. The ladder is composed of ten chromatography-purified individual DNA fragments (in base pairs): 1000, 900, 800, 700, 600, 500, 400, 300, 200, 100. It contains one reference band (500 bp) for easy orientation. The ladder is dissolved in TE buffer.

Storage Buffer (TE buffer)

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

6X Loading Dye Solution

10mM Tris-HCl (pH 7.6), 0.03% bromophenol blue, 0.03% xylene cyanol FF, 60% glycerol and 60mM EDTA.

QUALITY CONTROL ASSAY DATA

Well-defined bands are formed during agarose gel electrophoresis.

The DNA concentration is determined spectrophotometrically.

The absence of nucleases is confirmed by a direct nuclease activity assay.

Quality authorized by:



Jurgita Zilinskiene

Protocol for Loading

Loading mixture for the 5mm gel lane*:

Components	Gels	
	Agarose	Polyacrylamide
DNA ladder (0.5-1µg)	1-2µl	1-2µl
6X Loading Dye Solution	1µl	0.5µl
Deionized water	4-3µl	1.5-0.5µl
	6µl	3µl

Step 1: Mix gently

Step 2: Load on the gel

*For gels with other lane widths, the components of the mixture should be scaled either up or down. Use 0.2-0.4µl (0.1-0.2µg) of DNA ladder per 1mm of lane.

Recommendations

- Do not heat before loading.
- Dilute your DNA sample with the 6X Loading Dye Solution (#R0611, supplied with the ladder): mix 1 volume of the dye solution with 5 volumes of the DNA sample;
- Load the same volumes of the DNA sample and the DNA ladder;
- For quantification, adjust the concentration of the sample to equalize it approximately with the amount of DNA in the nearest band of the ladder.
- Visualize DNA by staining with ethidium bromide or with SYBR® Green I.

PRODUCT USE LIMITATION.

This product is developed, designed and sold exclusively *for research purposes and in vitro use only*. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

Please refer to www.fermentas.com for Material Safety Data Sheet of the product.

GeneRuler™ 100bp DNA Ladder

IMPROVEMENTS

1. Amounts of DNA per band equalized for easier quantification.
2. 80 bp band is removed.
3. 1031 bp fragment replaced by 1000 bp.

