PRODUCT INFORMATION

Thermo Scientific GeneRuler 50 bp DNA Ladder

Pub. No. MAN0013016
Rev. Date 12 February 2018 (Rev. C.00)

Components	#SM0371	#SM0372
GeneRuler 50 bp DNA Ladder, 0.5 µg/µL	50 µg (for 100 applications)	250 (5 x 50) µg (for 500 applications)
6X TriTrack DNA Loading Dye	1 mL	2 × 1 mL

Store at -25°C to -15°C

www.thermofisher.com

For Research Use Only. Not for use in diagnostic procedures.

Description

Thermo Scientific™ GeneRuler™ 50 bp DNA Ladder is designed for sizing and approximate quantification of wide range double-stranded DNA on agarose and polyacrylamide gels. The ladder is composed of thirteen chromatography-purified individual DNA fragments (in base pairs): 1000, 900, 800, 700, 600, **500**, 400, 300, **250**, 200, 150, 100, 50. It contains two reference bands (500 and 250 bp) for easy orientation.
The ladder is dissolved in TE buffer.

Storage Buffer

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

6X TriTrack DNA Loading Dye

10 mM Tris-HCl (pH 7.6), 0.03% bromophenol blue, 0.03% xylene cyanol FF, 0.15% orange G, 60% glycerol and 60 mM EDTA.

Protocol for Loading

Loading mixture for the 5 mm gel lane*:

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

Step 1: Mix gently

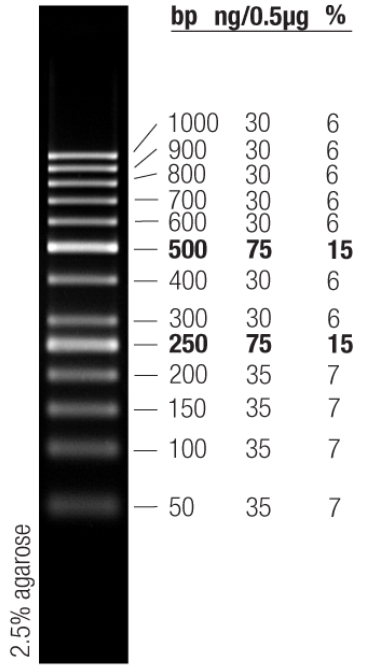
Step 2: Load on the gel

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

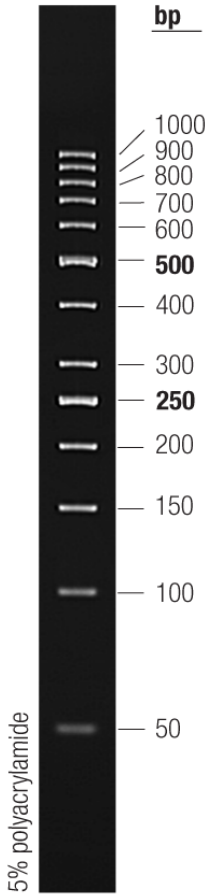
Recommendations

- Do not heat before loading.
- Dilute your DNA sample with the 6X TriTrack DNA Loading Dye (#R1161, 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.
- For DNA band visualization with SYBR™ Green and other intercalating dyes, do not add the dyes into the sample, use gel staining after electrophoresis or include dyes into agarose gel to avoid aberrant DNA migration.
- **Important note:** For DNA bands visualization with GelRed™ use gel staining after electrophoresis to avoid aberrant DNA migration.

GeneRuler 50 bp DNA Ladder



0.5 µg/lane, 8 cm length gel,
1X TBE, 5 V/cm, 1 h



0.5 µg/lane, 20 cm length gel,
1X TAE, 8 V/cm, 3 h

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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.thermofisher.com for Material Safety Data Sheet of the product.