

## PRODUCT INFORMATION

**Thermo Scientific**

# GeneRuler 50 bp DNA Ladder, ready-to-use

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Components	#SM0373
GeneRuler 50 bp DNA Ladder, ready-to-use, 0.1 µg/µL	50 µg (for 100 applications)
6X TriTrack DNA Loading Dye	1 mL

**Store at room temperature or at 4°C for up to 6 months. For longer periods store at -20°C.**

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

## Description

Thermo Scientific™ GeneRuler™ 50bp DNA Ladder, ready-to-use, 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 ready to use – it is premixed with 6X TriTrack DNA Loading Dye for direct loading on gel.

## Storage and Loading Buffer

10 mM Tris-HCl (pH 7.6), 10 mM EDTA, 0.005% bromophenol blue, 0.005% xylene cyanol FF, 0.025% orange G and 10% glycerol.

## 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

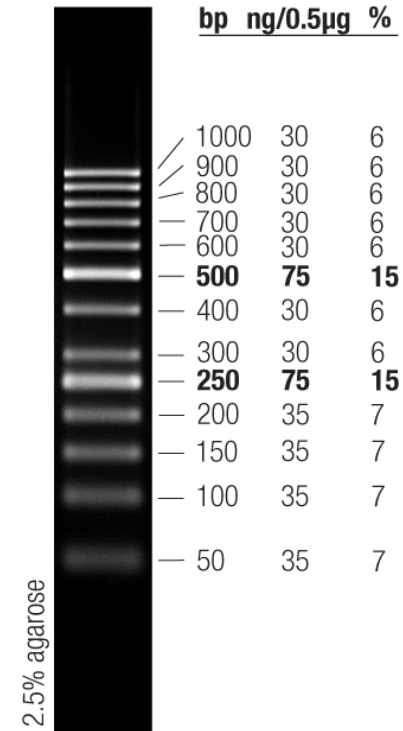
**Step 1:** Mix gently

**Step 2:** Load 1  $\mu\text{L}$  per 1 mm gel lane

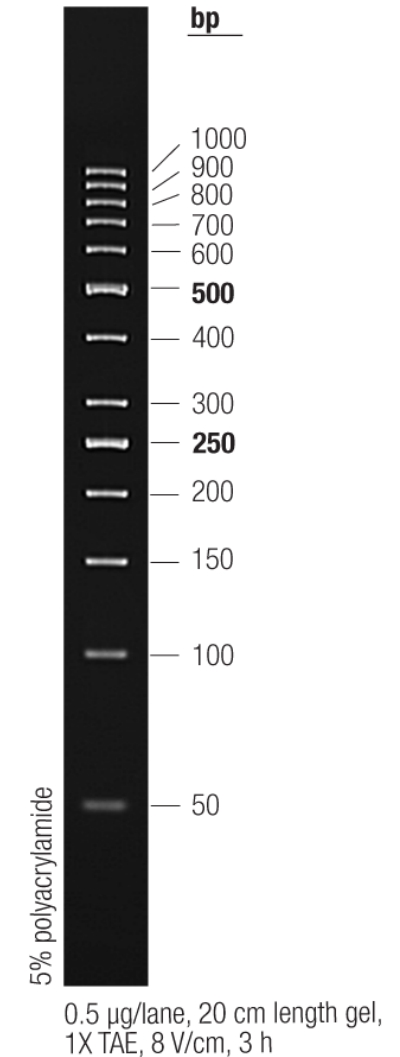
## Recommendations

- 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, ready-to-use



2.5% agarose  
0.5  $\mu\text{g}$ /lane, 8 cm length gel,  
1X TBE, 5 V/cm, 1 h



5% polyacrylamide  
0.5  $\mu\text{g}$ /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](http://www.thermofisher.com) for Material Safety Data Sheet of the product.

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