



PRODUCT INFORMATION

**Thermo Scientific
O'GeneRuler Ultra Low Range DNA
Ladder, ready-to-use**

Pub. No. MAN0013042

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Lot: _ Expiry Date: _

Components	#SM1223
O'GeneRuler™ Ultra Low Range DNA Ladder, ready-to-use, 0.1 µg/µL	50 µg (for 100 applications)
6X Orange DNA Loading Dye	1 mL

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

www.thermofisher.com

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

Description

Thermo Scientific™ O'GeneRuler™ Ultra Low Range DNA Ladder, ready-to-use, contains a mix of 11 chromatography-purified individual DNA fragments (in base pairs): 300, 200, 150, 100, 75, **50**, 35, 25, 20, 15, 10. It contains 50 bp reference band for easy orientation. The ladder is supplied in the storage and loading buffer and can be directly applied onto a gel.

It is specially designed for electrophoretic analysis of small DNA fragments on high percentage agarose (5%) and polyacrylamide (8-10%) gels.

Storage and Loading Buffer

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

6X Orange DNA Loading Dye

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

CERTIFICATE OF ANALYSIS

Well-defined bands are formed during agarose gel electrophoresis.

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

Quality authorized by:

Jurgita Zilinskiene

Rev.7

Protocol for Loading

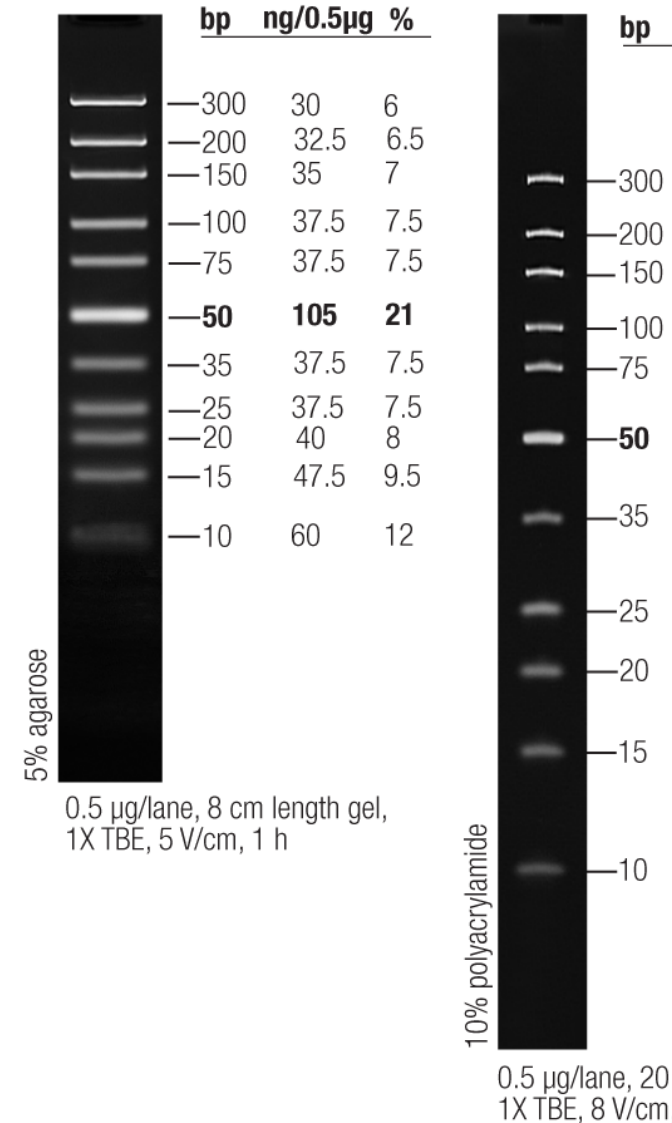
Step 1: Mix gently

Step 2: Load 1 μL per 1 mm gel lane

Recommendations

- Do not heat before loading.
- Dilute your DNA sample with the 6X Orange DNA Loading Dye (#R0631, 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.

O'GeneRuler Ultra Low Range DNA Ladder, ready-to-use



References

1. Stellwagen, N.C., Anomalous electrophoresis of deoxyribonucleic acid restriction fragments on polyacrylamide gels, *Biochemistry*, 22, 6186-6193, 1983.
2. Lane, D., et al., Use of gel retardation to analyze protein – nucleic acid interactions, *Microbiological Reviews*, 56, 509-528, 1992.
3. Stellwagen, N.C., Conformational isomers of curved DNA molecules can be observed by polyacrylamide gel electrophoresis, *Electrophoresis*, 21, 2327-2334, 2000.

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

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