

CERTIFICATE OF ANALYSIS

# O'RangeRuler™ 20bp DNA Ladder, ready-to-use

**#SM1323**      50µg (for 50-100 applications)

**Lot:**

Concentration:      0.1µg/µl  
Supplied with:      1ml 6X Orange Loading Dye Solution

**Store at room temperature, or at +4°C, for periods up to 6 months.**

**For longer periods, store at -20°C.**

In total 2 vials.

## Description

The O'RangeRuler™ 20bp DNA Ladder, ready-to-use, is designed for precise sizing of PCR products and other smaller double-stranded DNA fragments in high percentage agarose or non-denaturing polyacrylamide gels. It is a 20 bp step ladder especially useful for determining 20 bp differences between DNA fragments. The Ladder consists of purified and ligated blunt-ended basic unit repeats of 20 bp, and it is not suitable for DNA quantification on the gel. The Ladder contains the following 15 discrete fragments (in base pairs): **300**, 280, 260, 240, 220, **200**, 180, 160, 140, 120, **100**, 80, 60, 40, and 20. The brighter bands (100, 200 and 300bp) serve as reference bands. The Ladder is ready-to-use – it is premixed with the 6X Orange Loading Dye Solution for direct loading on gels.

## Storage and Loading Buffer

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

## 6X Orange Loading Dye Solution

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

## Quality Control Assay Data

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

## Protocol For Loading

**Step 1:** Mix gently

**Step 2:** Load 1µl per 1mm gel lane

## Recommendations

- Do not heat before loading.
- Dilute your DNA sample with the 6X Orange Loading Dye Solution. Mix 1 volume of the dye solution with 5 volumes of the DNA sample. The dye solution (#R0631) is supplied with the Ladder.
- Visualize DNA by staining either 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](http://www.fermentas.com) for Material Safety Data Sheet of the product.

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