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**CERTIFICATE OF ANALYSIS**

**pUC19 DNA/MspI (HpaII)  
Marker, 23**

**#SM0221**      50µg

**Lot:**

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

**Store at -20°C.**

1

In total 2 vials.

**Description**

pUC19 DNA was completely digested with MspI, purified and dissolved in a storage buffer.  
The DNA Marker contains the following 13 discrete fragments (in base pairs): 501, 489, 404, 331, 242, 190, 147, 111, 110, 67, 34, 34, 26.

**Storage 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**

Agarose gel electrophoretic analysis of homogeneity of MspI fragmentation patterns.

**Quality authorized by:**  Jurgita Zilinskiene

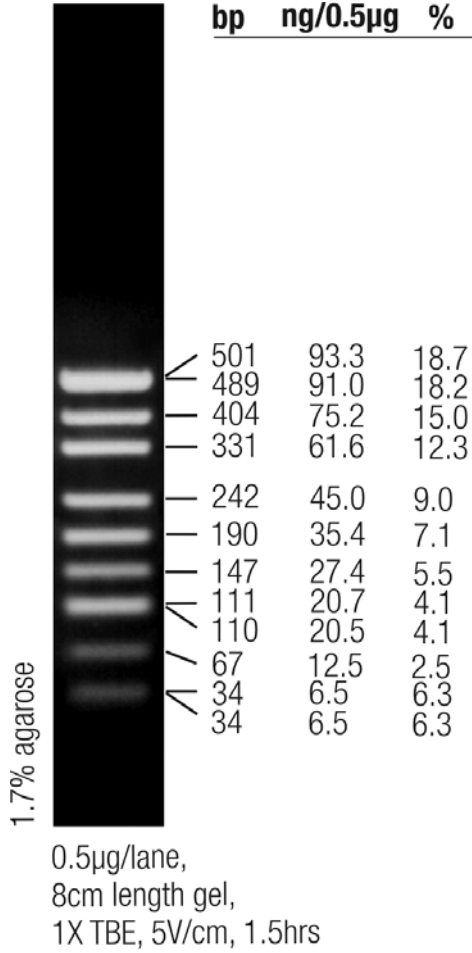
**pUC19 DNA/MspI (HpaII) Marker, 23**

**I. Loading on agarose gel:**

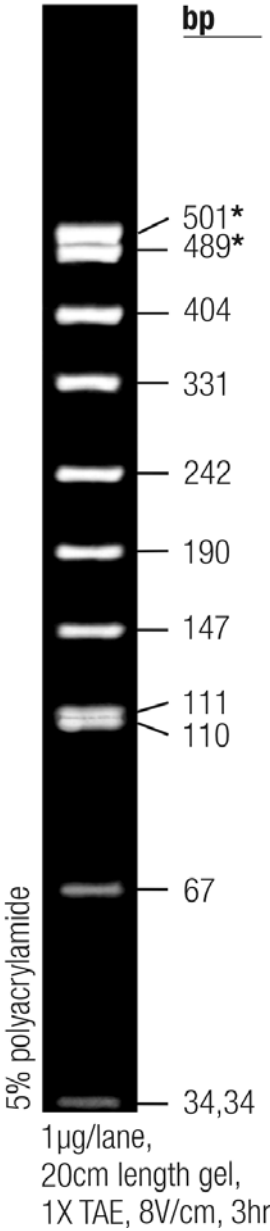
- prepare the DNA Marker before loading:  
 1µl (0.5µg) of the DNA Marker,  
 1µl of 6X Loading Dye Solution,  
 4µl of deionized water;
- vortex gently just prior to use;
- do not heat before loading;
- apply the prepared amount (6µl) of the DNA Marker on a 5mm lane of agarose gel;
- following electrophoretic separation on gel, visualize the DNA bands by ethidium bromide staining.

**Note**

- One vial (50µg) is sufficient for ~100 applications.
- Use 0.1µg (0.2µl) of the DNA Marker (before dilution) per 1mm of an agarose gel lane width.



\* The 501 and 489 bp bands migrate anomalously (1, 2, 3)



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## **II. Loading on polyacrylamide gel (1, 2, 3):**

- prepare the DNA Marker before loading:  
2µl (1µg) of the DNA Marker,  
0.5µl of 6x Loading Dye Solution,  
0.5µl of deionized water;
- vortex gently just prior to use;
- do not heat before loading;
- apply the prepared amount (3µl) of the DNA Marker on a 5mm lane of polyacrylamide gel;
- following electrophoretic separation on gel, visualize the DNA bands by ethidium bromide staining.

### **Note**

- One vial (50µg) is sufficient for ~50 applications.
- Use 0.2µg (0.4µl) of the DNA Marker per 1mm of a polyacrylamide gel lane width.

### **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.

### **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.