Fermentas
LIFE SCIENCES

CERTIFICATE OF ANALYSIS

ΦX174 DNA/BsuRI (HaeIII) Marker, 9

#SM0252 5x50 µg
(for 500 applications)

Lot: —

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

Store at -20°C

13025200029316000031

In total 7 vials.

Description

ΦX174 DNA was completely digested with BsuRI, purified and dissolved in a storage buffer.
The Marker contains the following 11 discrete fragments (in base pairs): 1353, 1078, 872, 603, 310, 281, 271, 234, 194, 118, 72.

Storage Buffer

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

6X DNA Loading Dye

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

Quality Control Assay Data

Well-defined bands are formed during agarose gel electrophoresis.
The DNA concentration is determined spectrophptometrically.
The absence of nucleases is confirmed by a direct nuclease activity assay.

Quality authorized by: Jurgita Zilinskiene

ISO 9001 ISO 14001
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Rev 53

RECOMMENDATIONS FOR USE

I. Loading on agarose gel:

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

Note

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

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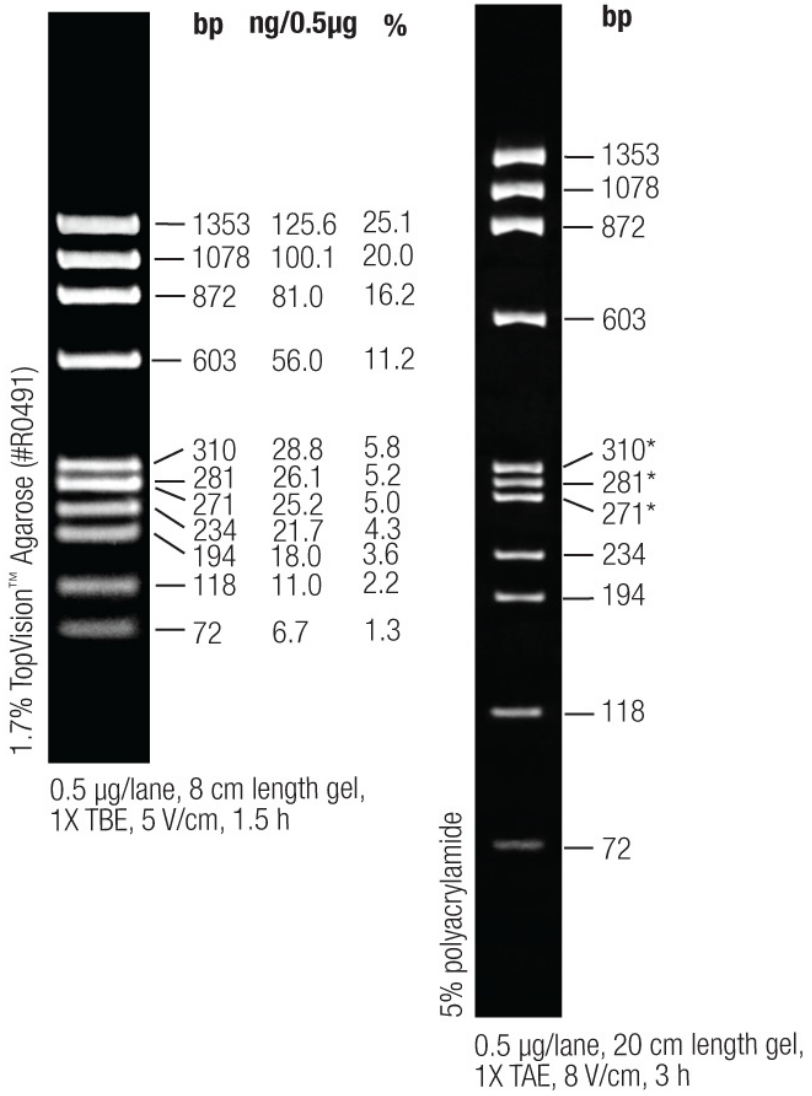

* The 310, 281 and 271 bp bands migrate anomalously (1, 2, 3)

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

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

Note

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

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 ratardation 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.

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 for Material Safety Data Sheet of the product.