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Product Information

10X PCR Buffer

Catalog Number **P2192**

Product Summary
DNase, RNase: None detected
Suitable for use in the Polymerase Chain Reaction (PCR) when diluted to 1X concentration (see comments section).

Composition of 10X concentrate

100 mM Trizma®-HCl, pH 8.3 at 25 °C
500 mM KCl
15 mM $MgCl_2$
0.01% (w/v) gelatin

Comments
Information about licenses to PCR can be obtained from The Perkin-Elmer Corporation or Roche Molecular Systems,Inc.

AmpliTaq® is a registered trademark of Roche Molecular Systems, Inc.

PCR Suitability
10X PCR Buffer was tested at a final concentration of 1X (10 mM Trizma®-HCl, pH 8.3 at 25 °C, 50 mM KCl, 1.5 mM $MgCl_2$, 0.001% (w/v) gelatin), in a reaction containing each dNTP at 200 µM, primers defining an approximately 500 base pair region of λDNA at 1.0 µM each, λ DNA template at 1 ng/100 µl, and mpliTaq®DNA Polymerase at 2.5 Units/100 µl. The reaction underwent 25 cycles of 94 °C to denature the double stranded DNA, 55 °C to anneal the DNA segments, and 72 °C to extend the DNA segments. A single band of approximately 500 base pairs was visualized following electrophoresis of the reaction product in a 1.5% agarose gel.

Endonuclease-exonuclease
One µg of λ Hind III fragments was incubated for 16 hours at 37 °C with 10X PCR Buffer at a final concentration of 1X in a 50 µl reaction mixture containing 30 mM Trizma®-HCl, pH 7.8, 50 mM NaCl and 10 mM $MgCl_2$. No degradation of the DNA fragments was detected by agarose gel electrophoresis. Detection limit: Degradation of 10% of the DNA substrate is detectable.

Endonuclease (Nickase)
One µg of pBR322 DNA was incubated for 16 hours at 37 °C with 10X PCR Buffer at a final concentration of 1X in a 50 µl reaction mixture containing 30 mM Trizma®-HCl, pH 7.8, 50 mM NaCl and 10 mM $MgCl_2$. No conversion of the covalently closed circular DNA to the nicked or linear form was observed by agarose gel electrophoresis. Detection limit: Conversion of 1% of the DNA substrate is detectable.

RNase
Two µg of transfer RNA were incubated for 16 hours at 37 °C with 10X PCR Buffer at a final concentration of 1X in a 50 µl reaction mixture containing 30 mM Trizma®-HCl, pH 7.8, 50 mM NaCl and 10 mM $MgCl_2$. No degradation of the tRNA was detected by polyacrylamide gel electrophoresis. Detection limit: Degradation of 10% of the tRNA substrate is detectable.

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