



Product Information

10X PCR BUFFER II, PCR Reagent

Product No. **P 2317**

Store at 0 to -20 °C

Product Summary

DNase, RNase: None detected

Suitable for use with magnesium chloride (Product No. M 8787) in optimizing the Polymerase Chain Reaction (PCR).

Composition of the 10X concentrate

100 mM Trizma®-HCl, pH 8.3 at 25 °C
500 mM KCl

PCR Suitability

10X PCR Buffer II was tested at a final concentration of 1X (10 mM Tris-HCl, pH 8.3 at 25 °C, 50 mM KCl), in reactions containing 1-4 mM MgCl₂, each dNTP at 200 μM, primers defining an approximately 500 base pair region of λ DNA at 1.0 μM each, λ DNA template at 1 ng/100 μl, and Taq 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. Following electrophoresis of the reaction products in 1.5% agarose gel, a single band of approximately 500 base pairs was visualized for PCRs containing 1-1.5 mM MgCl₂.

Endonuclease-exonuclease

One μg of λ Hind III fragments was incubated for 16 hours at 37 °C with 10X PCR Buffer II 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 MgCl₂. No degradation of the DNA fragments was detected following 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 II 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 MgCl₂. No conversion of the covalently closed circular DNA to the nicked or linear form was observed following 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 II 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 MgCl₂. No degradation of the tRNA was detected following polyacrylamide gel electrophoresis. Detection limit: Degradation of 10% of the tRNA substrate is detectable.

The PCR process is covered by patents owned by Hoffmann-La Roche, Inc. Purchase of these products does not convey a license under these patents. Information about licenses to PCR can be obtained from The Perkin-Elmer Corporation or Roche Molecular Systems, Inc.

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