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New England Biolabs Certificate of Analysis

Product Name: Bst DNA Polymerase, Full Length

Catalog Number: M0328S
Concentration: 5,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme that will incorporate 10

nmol of dNTP into acid insoluble material in 30 minutes at 65°C.

Packaging Lot Number: 10186846
Expiration Date: 04/2025
Storage Temperature: -20°C

Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.1 %

Triton®X-100, 50 % Glycerol, (pH 7.1 @ 25°C)

Specification Version: PS-M0328S/V v3.0

Bst DNA Polymerase, Full Length Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
M0328SVIAL	Bst DNA Polymerase, Full Length	10186845	Pass	
B9004SVIAL	ThermoPol® Reaction Buffer Pack	10177927	Pass	

Assay Name/Specification	Lot # 10186846
Endonuclease Activity (Nicking) A 50 μl reaction in ThermoPol® Reaction Buffer containing 1 μg of supercoiled PhiX174 DNA and a minimum of 50 units of Bst DNA Polymerase, Full Length incubated for 4 hours at 37°C and 65°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 units of Bst DNA Polymerase, Full Length incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl2 containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units Bst DNA Polymerase, Full Length incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
Protein Purity Assay (SDS-PAGE)	Pass



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Assay Name/Specification	Lot # 10186846
Bst DNA Polymerase, Full Length is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	
RNase Activity Assay A 10 μ I reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 5 units of Bst DNA Polymerase, Full Length is incubated at 37°C. After incubation for 4 hours, the substrate RNA is assessed by gel electrophoresis using fluorescent detection and compared to the product's RNase QC Standard resulting in no additional non-specific nuclease degradation.	Pass
qPCR DNA Contamination (E. coli Genomic) A minimum of 5 units of Bst DNA Polymerase, Full Length is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.	Pass

This product has been tested and shown to be in compliance with all specifications.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Lea Antonpoulos Production Scientist

01 May 2023

Michael Tonello

Packaging Quality Control Inspector

13 Jun 2023



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