240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
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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:	*10226651*
Expiration Date:	*01/2026*
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	10226650	**Pass**
B9004SVIAL	ThermoPol® Reaction Buffer Pack	10231728	**Pass**

Assay Name/Specification	**Lot # 10226651**
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 65ºC 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 37ºC 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 # 10226651
Bst DNA Polymerase, Full Length is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	
RNase Activity Assay A 10 µl 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.

Trinh Nguyen
Production Scientist
30 Apr 2024

Michael Tonello
Packaging Quality Control Inspector
07 May 2024