

New England Biolabs Certificate of Analysis

Product Name: *Bst-XT WarmStart™ DNA Polymerase*
Catalog Number: *M9204L*
Concentration: *8,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme that will incorporate 25 nmol of dNTPs into acid insoluble material in 30 minutes at 65°C.*
Packaging Lot Number: *10282947*
Expiration Date: *04/2027*
Storage Temperature: *-20°C*
Storage Conditions: *20 mM Tris, 100 mM KCl, 0.5 mM TCEP, 0.1 mM EDTA, 1X Stabilizer, 50% Glycerol (pH 7.5 @ 25°C)*
Specification Version: *PS-M9204S/L v1.0*

Bst-XT WarmStart™ DNA Polymerase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M9204LVIAL	Bst-XT WarmStart™ DNA Polymerase	10282944	Pass
B9250SVIAL	10X Bst-XT Isothermal Amplification Buffer	10282958	Pass
B1003SVIAL	Magnesium Sulfate (MgSO ₄) Solution	10270426	Pass

Assay Name/Specification	Lot # 10282947
Endonuclease Activity (Nicking) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 600 units of Bst -XT DNA Polymerase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Functional Testing (DNA-LAMP) A 25 µl LAMP reaction with 8 units of Bst -XT WarmStart™ DNA Polymerase in 1X Bst -XT Isothermal Amplification Buffer with 10 ng of genomic DNA and 1X LAMP fluorescent dye results in a threshold time of ≤ 15 minutes as determined by fluorescent detection.	Pass
Functional Testing (RT-LAMP) A 25 µl RT-LAMP reaction with 8 units of Bst -XT WarmStart™ DNA Polymerase in 1X Bst -XT Isothermal Amplification Buffer with 10 ng of genomic RNA and 1X LAMP fluorescent dye results in a threshold time of ≤ 15 minutes as determined by fluorescent detection.	Pass

Assay Name/Specification	Lot # 10282947
<p>Inhibition of Primer Extension (Hot Start) A 50 µl reaction in 1X Bst -XT Isothermal Amplification Buffer containing 6 mM MgSO₄ and 1.4 mM dNTPs in the presence of 1.6 µM of a fluorescent internally labeled oligonucleotide and a minimum of 16 units of Bst -XT WarmStart™ DNA Polymerase incubated for 2 hours at 25°C yields <5% extension as determined by capillary electrophoresis.</p>	Pass
<p>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 8 units of Bst -XT WarmStart™ DNA Polymerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity (Microfluidic Electrophoresis) Bst -XT DNA Polymerase is ≥95% pure as determined by microfluidic electrophoresis.</p>	Pass
<p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 8 units of Bst -XT WarmStart™ DNA Polymerase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass
<p>Single Stranded DNase Activity (FAM-Labeled Oligo) A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 600 units of Bst -XT DNA Polymerase incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 8 units of Bst -XT WarmStart™ DNA Polymerase 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.</p>	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.

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11 Apr 2025

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15 Apr 2025