

New England Biolabs Certificate of Analysis

Product Name: WarmStart® RTx Reverse Transcriptase (Glycerol-free)
Catalog Number: M0439L
Concentration: 75,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will incorporate 1 nmol of dTTP into acid-insoluble material in 20 minutes at 50°C.
Packaging Lot Number: 10225699
Expiration Date: 01/2026
Storage Temperature: -80°C
Storage Conditions: 10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, (pH 7.4 @ 25°C)
Specification Version: PS-M0439L v1.0

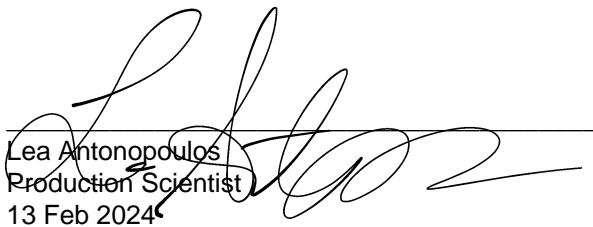
| WarmStart® RTx Reverse Transcriptase (Glycerol-free) Component List | | | |
|---|--|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0439LVIAL | WarmStart® RTx Reverse Transcriptase (Glycerol-free) | 10225690 | Pass |
| B1714SVIAL | Isothermal Amplification Buffer (Lyo-compatible) | 10225701 | Pass |

| Assay Name/Specification | Lot # 10225699 |
|---|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in Isothermal Amplification Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 15 units of RTx Reverse Transcriptase (Glycerol-free) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in Isothermal Amplification Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 15 units of RTx Reverse Transcriptase (Glycerol-free) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Functional Testing (RT-LAMP) A 25 µl RT-LAMP reaction with 7.5 units of WarmStart® RTx Reverse Transcriptase (Glycerol-free), 10 ng of genomic RNA and 1X LAMP fluorescent dye results in a threshold time of ≤ 20 minutes as determined by fluorescent detection. | Pass |

| Assay Name/Specification | Lot # 10225699 |
|--|----------------|
| <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 15 units of WarmStart® RTx Reverse Transcriptase (Glycerol-free) 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 Assay (SDS-PAGE) RTx Reverse Transcriptase (Glycerol-free) is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</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 15 units of WarmStart® RTx Reverse Transcriptase (Glycerol-free) 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>qPCR DNA Contamination (E. coli Genomic) A minimum of 15 units of RTx Reverse Transcriptase (Glycerol-free) 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.

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13 Feb 2024



Michael Tonello
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20 Feb 2024