

## New England Biolabs Certificate of Analysis

**Product Name:** *Isothermal Amplification Buffer*  
**Catalog Number:** *B0537S*  
**Concentration:** *10 X Concentrate*  
**Packaging Lot Number:** *10186903*  
**Expiration Date:** *05/2025*  
**Storage Temperature:** *-20°C*  
**Specification Version:** *PS-B0537S v2.0*  
**Composition (1X):** *20 mM Tris-HCl, 50 mM KCl, 10 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 2 mM MgSO<sub>4</sub>, 0.1 % Tween<sup>®</sup> 20, (pH 8.8 @ 25°C)*

Isothermal Amplification Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B0537SVIAL	Isothermal Amplification Buffer	10165335	Pass

Assay Name/Specification	Lot # 10186903
<p><b>Endonuclease Activity (Nicking, Buffer)</b> A 50 µl reaction in 2X Isothermal Amplification Buffer containing 1 µg of supercoiled PhiX174 DNA incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>Non-Specific DNase Activity (16 hour, Buffer)</b> A 50 µl reaction in 2X Isothermal Amplification Buffer containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>Phosphatase Activity (pNPP, Buffer)</b> A 200 µl reaction in 1M Diethanolamine @ pH 9.8 and 0.5 mM MgCl<sub>2</sub> containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 40 µl Isothermal Amplification Buffer incubated for 4 hours at 37°C yields &lt;0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	<b>Pass</b>
<p><b>RNase Activity Assay (4 Hour Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Isothermal Amplification Buffer is incubated at 37°C. After incubation for 4 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>

Assay Name/Specification	Lot # 10186903
<p><b>pH (buffers/solutions)</b> The pH of 10X Isothermal Amplification Buffer is between pH 8.7 and 8.9 at 25°C.</p>	<b>Pass</b>
<p><b>qPCR DNA Contamination (E. coli Genomic, Buffer)</b> A minimum of 1 µl of Isothermal Amplification Buffer 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>	<b>Pass</b>

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

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03 Oct 2022



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26 Jul 2023