Product Name: Isothermal Amplification Buffer
Catalog Number: B0537S
Concentration: 10 X Concentrate
Packaging Lot Number: 10114439
Expiration Date: 02/2024
Storage Temperature: -20°C
Specification Version: PS-B0537S v2.0
Composition (1X): 20 mM Tris-HCl, 50 mM KCl, 10 mM (NH4)2SO4, 2 mM MgSO4, 0.1 % Tween® 20, (pH 8.8 @ 25°C)

Isothermal Amplification Buffer Component List

<table>
<thead>
<tr>
<th>NEB Part Number</th>
<th>Component Description</th>
<th>Lot Number</th>
<th>Individual QC Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0537SVIAL</td>
<td>Isothermal Amplification Buffer</td>
<td>10105662</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Assay Name/Specification

**Non-Specific DNase Activity (16 hour, Buffer)**
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.

**Phosphatase Activity (pNPP, Buffer)**
A 200 µl reaction in 1M Diethanolamine @ pH 9.8 and 0.5 mM MgCl2 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 <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.

**RNAse Activity Assay (4 Hour Digestion)**
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, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

**pH (buffers/solutions)**
The pH of 10X Isothermal Amplification Buffer is between pH 8.7 and 8.9 at 25°C.

**qPCR DNA Contamination (E. coli Genomic, Buffer)**
Pass
Assay Name/Specification | Lot # 10114439
--- | ---
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. | 
Endonuclease Activity (Nicking, Buffer) | Pass
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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.

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](http://www.neb.com/trademarks) for additional information.

Christie Vazquez
Production Scientist
20 Aug 2021

Michael Tonello
Packaging Quality Control Inspector
20 Aug 2021