Product Name: Isothermal Amplification Buffer
Catalog Number: B0537S
Concentration: 10 X Concentrate
Packaging Lot Number: 10067614
Expiration Date: 01/2023
Storage Temperature: -20°C
Specification Version: PS-B0537S v1.0
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>10063855</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Assay Name/Specification

Endonuclease Activity (Nicking, Buffer)
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.

Non-Specific DNase Activity (16 hour, Buffer)
A 50 µl reaction in 2X Isothermal Amplification Buffer containing 1 µg of T3 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.

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)
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.

Phosphatase Activity (pNPP, Buffer)
Pass
<table>
<thead>
<tr>
<th>Assay Name/Specification</th>
<th>Lot # 10067614</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 &lt;0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</td>
<td></td>
</tr>
</tbody>
</table>

**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.  

Pass

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

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Christie Vazquez  
Production Scientist  
22 Jan 2020

Michael Tonello  
Packaging Quality Control Inspector  
07 Feb 2020