New England Biolabs
Product Specification

Product Name: Thermolabile Proteinase K
Catalog #: P8111S
Concentration: 120 units/ml
Unit Definition: One unit is defined as the amount of enzyme required to release 1.0 μmol of 4-nitroaniline per minute from N-Succinyl-Ala-Ala-Pro-Phe-p-nitroanilide at 25°C in a total reaction volume of 105 µl.
Shelf Life: 24 months
Storage Temp: -20°C
Storage Conditions: 20 mM Tris-HCl, 1 mM CaCl₂, 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-P8111S v1.0
Effective Date: 19 Oct 2018

<table>
<thead>
<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>qPCR DNA Contamination (Eukaryotic Genomic)</strong> - A minimum of 0.12 units of Thermolabile Proteinase K is screened for the presence of eukaryotic genomic DNA using SYBR® Green qPCR with universal primers for the 18S rRNA locus. Results are quantified using a standard curve generated from purified <em>E. album</em> genomic DNA. The measured level of eukaryotic genomic DNA contamination is ≤ 2.5 pg DNA/µl.</td>
</tr>
<tr>
<td><strong>qPCR DNA Contamination (E. coli Genomic)</strong> - A minimum of 0.12 units of Thermolabile Proteinase K is screened for the presence of <em>E. coli</em> genomic DNA using SYBR® Green qPCR with primers specific for the <em>E. coli</em> 16S rRNA locus. Results are quantified using a standard curve generated from purified <em>E. coli</em> genomic DNA. The measured level of <em>E. coli</em> genomic DNA contamination is ≤ 1 <em>E. coli</em> genome.</td>
</tr>
<tr>
<td><strong>RNase Activity (Extended Digestion)</strong> - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Thermolabile Proteinase K is incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</td>
</tr>
<tr>
<td><strong>Single Stranded DNase Activity (FAM-Labeled Oligo)</strong> - A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 0.6 units of Thermolabile Proteinase K incubated for 16 hours at 37°C yields &lt;5% degradation as determined by capillary electrophoresis.</td>
</tr>
</tbody>
</table>

Derek Robinson
Director of Quality Control

Date 19 Oct 2018

PS-P8111S v1.0 Page 1 of 1