NEW ENGLAND BioLabs® Inc.

240 County Road
Ipswich, MA 01938-2723

Tel 978-927-5054
Fax 978-921-1350

www.neb.com
info@neb.com

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 $CaCl_2$, 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version:	*PS-P8111S v1.0*
Effective Date:	*19 Oct 2018*

Assay Name/Specification (minimum release criteria)

qPCR DNA Contamination (Eukaryotic Genomic) - 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 *E. album* genomic DNA. The measured level of eukaryotic genomic DNA contamination is ≤ 2.5 pg DNA/µl.

qPCR DNA Contamination (E. coli Genomic) - A minimum of 0.12 units of Thermolabile Proteinase K 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.

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 1 µl of Thermolabile Proteinase K is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

Single Stranded DNase Activity (FAM-Labeled Oligo) - 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 <5% degradation as determined by capillary electrophoresis.

Date 19 Oct 2018

Derek Robinson
Director of Quality Control

ISO 9001 Registered Quality Management
ISO 14001 Registered Environmental Management
ISO 13485 Registered Medical Devices