240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
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www.neb.com
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New England Biolabs
Certificate of Analysis

Product Name:	*Proteinase K, Molecular Biology Grade*
Catalog Number:	*P8107S*
Concentration:	*800 U/ml*
Unit Definition:	*One unit will digest urea-denatured hemoglobin at 37°C (pH 7.5) per minute to produce equal absorbance as 1.0 µmol L-tyrosine using Folin & Ciocalteu's phenol reagent.*
Packaging Lot Number:	*10229227*
Expiration Date:	*10/2026*
Storage Temperature:	*-20°C*
Storage Conditions:	*20 mM Tris-HCl, 1 mM CaCl2, 50% Glycerol, (pH 7.4 @ 25°C)*
Specification Version:	*PS-P8107S v2.0*

Proteinase K, Molecular Biology Grade Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
P8107SVIAL	Proteinase K, Molecular Biology Grade	10213809	**Pass**

Assay Name/Specification	**Lot # 10229227**
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 RF I DNA and a minimum of 0.8 units of Proteinase K, Molecular Biology Grade incubated for 4 hours at 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 8 units of Proteinase K, Molecular Biology Grade incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 0.8 units of Proteinase K, Molecular Biology Grade incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of fluorescein labeled RNA	**Pass**

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Assay Name/Specification	Lot # 10229227
transcript and a minimum of 0.8 units of Proteinase K, Molecular Biology Grade is incubated at 37ºC. 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 4 units of Proteinase K, Molecular Biology Grade incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.	**Pass**
qPCR DNA Contamination (Eukaryotic Genomic) A minimum of 1.6 units of Proteinase K, Molecular Biology Grade 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.	**Pass**

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 for additional information.

Beth M. Paschal

Beth Paschal
Production Scientist
01 Nov 2023

Michael Tonello

Michael Tonello
Packaging Quality Control Inspector
23 Feb 2024