

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.
Lot Number: 10046009
Expiration Date: 04/2021
Storage Temperature: -20°C
Storage Conditions: 20 mM Tris-HCl, 1 mM CaCl₂, 50% Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-P8107S v1.0

| Proteinase K, Molecular Biology Grade Component List | | | |
|--|---------------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| P8107SVIAL | Proteinase K, Molecular Biology Grade | 10039756 | Pass |


| Assay Name/Specification | Lot # 10046009 |
|---|----------------|
| <p>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 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 8 units of Proteinase K, Molecular Biology Grade incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> | Pass |
| <p>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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass |
| <p>qPCR DNA Contamination (Eukaryotic Genomic) A minimum of 1.6 units of Proteinase K, Molecular Biology Grade is screened for the</p> | Pass |

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|---|----------------|
| <p>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.</p> | |
| <p>RNase Activity (Extended Digestion) A 10 μl reaction in NEBuffer 4 containing 40 ng of fluorescein labeled RNA transcript and a minimum of 0.8 units of Proteinase K, Molecular Biology Grade 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.</p> | Pass |
| <p>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.</p> | Pass |

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



Beth Paschal
Production Scientist
16 Apr 2019



Jay Minichiello
Packaging Quality Control Inspector
13 Jun 2019