NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*T4 Polynucleotide Kinase Reaction Buffer*
Catalog Number:	*B0201S*
Concentration:	*10 X Concentrate*
Lot Number:	*10031156*
Expiration Date:	*11/2021*
Storage Temperature:	*-20°C*
Specification Version:	*PS-B0201S v1.0*
Composition (1X):	*70 mM Tris-HCl, 10 mM MgCl2, 5 mM DTT, (pH 7.6 @ 25°C)*

T4 Polynucleotide Kinase Reaction Buffer Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
B0201SVIAL	T4 Polynucleotide Kinase Reaction Buffer	10016553	**Pass**

Assay Name/Specification	**Lot # 10031156**
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X T4 Polynucleotide Kinase Reaction 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.	**Pass**
Functional Testing (T4 PNK Reaction Buffer) A 50 µl reaction in 1X T4 Polynucleotide Kinase Reaction Buffer containing 66 µM γ-^{33}P ATP, 0.26 mM 5´-hydroxyl-terminated salmon sperm DNA and 1 unit of T4 Polynucleotide Kinase incubated for 30 minutes at 37°C results in the incorporation of 1 nmol of acid insoluble ^{33}P as determined by scintillation counting.	**Pass**
Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X T4 Polynucleotide Kinase Reaction Buffer containing 1 µg of HaeIII digested PhiX174 RF I DNA 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 (Buffer) A 10 µl reaction in 1X T4 Polynucleotide Kinase Reaction Buffer containing 40 ng of a 300 base single-stranded RNA is incubated at 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by polyacrylamide gel electrophoresis.	**Pass**

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

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Mary Lorenzen
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