

New England Biolabs Product Specification

Product Name: T4 Polynucleotide Kinase Reaction Buffer
Catalog #: B0201S
Concentration: 10X Concentrate
Shelf Life: 36 months
Storage Temp: -20°C
Composition (1X): 70 mM Tris-HCl, 10 mM MgCl₂, 5 mM DTT, (pH 7.6 @ 25°C)
Specification Version: PS-B0201S v1.0
Effective Date: 18 Apr 2018

Assay Name/Specification (minimum release criteria)

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.

Functional Testing (T4 PNK Reaction Buffer) - A 50 µl reaction in 1X T4 Polynucleotide Kinase Reaction Buffer containing 66 µM γ-³³P 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 ³³P as determined by scintillation counting.

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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

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 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by polyacrylamide gel electrophoresis.



Date 18 Apr 2018

Derek Robinson
Director of Quality Control

