

New England Biolabs Certificate of Analysis

Product Name: T4 DNA Ligase Reaction Buffer
Catalog Number: B0202S
Concentration: 10 X Concentrate
Lot Number: 10047469
Expiration Date: 06/2022
Storage Temperature: -20°C
Specification Version: PS-B0202S v2.0
Composition (1X): 50 mM Tris-HCl, 10 mM MgCl₂, 10 mM DTT, 1 mM ATP, (pH 7.5 @ 25°C)


T4 DNA Ligase Reaction Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B0202SVIAL	T4 DNA Ligase Reaction Buffer	10046991	Pass

Assay Name/Specification	Lot # 10047469
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X T4 DNA Ligase 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 (DNA Ligase Buffer) A 20 µl reaction in 1X T4 DNA Ligase Reaction Buffer containing 6 µg of Lambda-HindIII DNA and 1 unit of T4 DNA Ligase incubated for 30 minutes at 16°C results in approximately 50% ligation of the DNA fragments as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X T4 DNA Ligase Reaction Buffer containing 1 µg of PhiX174-HaeIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
pH (buffers/solutions) The pH of 10X T4 DNA Ligase Reaction Buffer is between pH 7.4 and 7.6 at 25°C.	Pass
RNase Activity (Buffer) A 10 µl reaction in 1X T4 DNA Ligase 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 fluorescent detection.	Pass

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



Mary Lorenzen
Production Scientist
12 Jun 2019



Jay Minichiello
Packaging Quality Control Inspector
12 Jul 2019