

New England Biolabs Certificate of Analysis

Product Name: T4 DNA Ligase Reaction Buffer
Catalog Number: B0202S
Concentration: 10 X Concentrate
Packaging Lot Number: 10255381
Expiration Date: 06/2027
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 | 10243106 | Pass |

| Assay Name/Specification | Lot # 10255381 |
|---|----------------|
| 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 |
| 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 |
| pH (buffers/solutions) The pH of 10X T4 DNA Ligase Reaction Buffer is between pH 7.4 and 7.6 at 25°C. | Pass |

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

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Alison Dolan
Production Scientist
14 Jun 2024



Michael Tonello
Packaging Quality Control Inspector
21 Aug 2024