

New England Biolabs Product Specification

Product Name: T4 DNA Ligase Reaction Buffer
Catalog #: B0202S
Concentration: 10X
Shelf Life: 36 months
Storage Temp: -20°C
Composition (1X): 50 mM Tris-HCl, 10 mM MgCl₂, 10 mM DTT, 1 mM ATP, (pH 7.5 @ 25°C)
Specification Version: PS-B0202S v2.0
Effective Date: 29 Mar 2017

Assay Name/Specification (minimum release criteria)

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.

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.

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.

pH (buffers/solutions) - The pH of 10X T4 DNA Ligase Reaction Buffer is between pH 7.4 and 7.6 at 25°C.

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.



Date 29 Mar 2017

Derek Robinson
Director of Quality Control

