

New England Biolabs Certificate of Analysis

Product Name: 9°N™ DNA Ligase
Catalog Number: M0238S
Concentration: 40,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to give 50% ligation of the 12-base pair cohesive ends of 1 µg of BstEII-digested Lambda DNA in 15 minutes at 45°C.
Packaging Lot Number: 10102978
Expiration Date: 03/2023
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 10 mM (NH₄)₂SO₄, 1 mM DTT, 0.1 mM EDTA, 200 µg/ml BSA, 50 % Glycerol, (pH 7.5 @ 25°C)
Specification Version: PS-M0238S/L v1.0

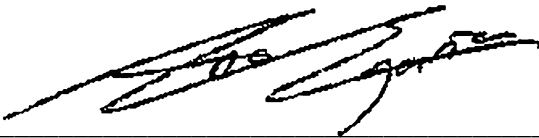
| 9°N™ DNA Ligase Component List | | | |
|--------------------------------|----------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0238SVIAL | 9°N™ DNA Ligase | 10102979 | Pass |
| B0238SVIAL | 10X 9°N™ DNA Ligase Buffer | 10065921 | Pass |

| Assay Name/Specification | Lot # 10102978 |
|--|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 400 units of 9°N™ DNA Ligase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in 9°N™ DNA Ligase Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 400 units of 9°N™ DNA Ligase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 4 containing 1 µg of Lambda-HindIII DNA and a minimum of 80 units of 9°N™ DNA Ligase 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 (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA | Pass |

| Assay Name/Specification | Lot # 10102978 |
|--|----------------|
| and a minimum of 1 µl of 9°N™ DNA Ligase is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection. | |

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



Ana Egana
Production Scientist
26 May 2021



Michael Tonello
Packaging Quality Control Inspector
26 May 2021