

New England Biolabs Certificate of Analysis

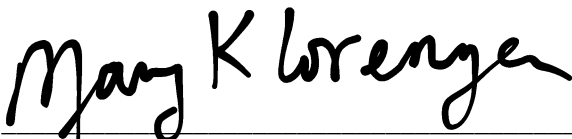
Product Name: 9°N™ DNA Ligase
Catalog Number: M0238S
Concentration: 40,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to give 50% ligation of the 12-base pair cohesive ends of 1 µg of BstEII-digested Lambda DNA in 15 minutes at 45°C.
Lot Number: 10039465
Expiration Date: 04/2021
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	10039466	Pass
B0238SVIAL	10X 9°N™ DNA Ligase Buffer	10039939	Pass

Assay Name/Specification	Lot # 10039465
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 # 10039465
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.



Mary Lorenzen
Production Scientist
22 Apr 2019



Michael Tonello
Packaging Quality Control Inspector
22 Apr 2019