

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: 10230154
Expiration Date: 02/2026
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 rAlbumin, 50 % Glycerol, (pH 7.5 @ 25°C)
Specification Version: PS-M0238S v2.0

9°N™ DNA Ligase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0238SVIAL	9°N™ DNA Ligase	10230152	Pass
B0238SVIAL	10X 9°N™ DNA Ligase Buffer	10208718	Pass

Assay Name/Specification	Lot # 10230154
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 # 10230154
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.

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Alison Dolan
Production Scientist
06 Feb 2024



Josh Hersey
Packaging Quality Control Inspector
23 Feb 2024