

New England Biolabs Certificate of Analysis

Product Name: NEBNext® Second Strand Synthesis (dNTP-free) Reaction Buffer
Catalog Number: B6117S
Concentration: 10 X Concentrate
Packaging Lot Number: 10238002
Expiration Date: 11/2025
Storage Temperature: -20°C
Specification Version: PS-B6117S v2.0
Composition (1X): 20 mM Tris-HCl, 12 mM (NH₄)₂SO₄, 5 mM MgCl₂, 0.16 mM β-NAD, (pH 7.5 @ 25°C)

NEBNext® Second Strand Synthesis (dNTP-free) Reaction Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B6117SVIAL	NEBNext® Second Strand Synthesis (dNTP-free) Reaction Buffer	10235752	Pass

Assay Name/Specification	Lot # 10238002
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X NEBNext® Second Strand Synthesis (dNTP-free) 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
Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X NEBNext® Second Strand Synthesis (dNTP-free) Reaction Buffer containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII 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
Phosphatase Activity (pNPP, Buffer) A 200 µl reaction in 1M Diethanolamine @ pH 9.8 and 0.5 mM MgCl ₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 20 µl NEBNext® Second Strand Synthesis (dNTP-free) Reaction Buffer incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
RNase Activity (Buffer) A 10 µl reaction in 1X NEBNext® Second Strand Synthesis (dNTP-free) 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 gel electrophoresis using fluorescent detection.	Pass

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.



Christine Sumner
Production Scientist
27 Mar 2024



Josh Hersey
Packaging Quality Control Inspector
27 Mar 2024