

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: 10213054
Expiration Date: 04/2025
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	10204100	Pass

Assay Name/Specification	Lot # 10213054
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.

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Christine Sumner
Production Scientist
20 Oct 2023



Michael Tonello
Packaging Quality Control Inspector
20 Oct 2023