

New England Biolabs Certificate of Analysis

Product Name: *rCutSmart™ Buffer*
Catalog Number: *B6004S*
Concentration: *10 X Concentrate*
Packaging Lot Number: *10232267*
Expiration Date: *02/2027*
Storage Temperature: *-20°C*
Specification Version: *PS-B6004S/V v1.0*
Composition (1X): *50 mM Potassium Acetate , 20 mM Tris Acetate, 10 mM Magnesium Acetate, 100 µg/ml rAlbumin, (pH 7.9 @ 25°C)*

rCutSmart™ Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B6004SVIAL	rCutSmart™ Buffer	10224841	Pass

Assay Name/Specification	Lot # 10232267
Conductivity (buffers/solutions) The conductivity of 10X rCutSmart™ Buffer is between 40 and 46 mS/cm at 25°C.	Pass
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X rCutSmart™ 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
Functional Testing (Restriction Digest, Buffer) A 50 µl reaction in 1X rCutSmart™ Buffer containing 1 µg of Lambda DNA and 1 unit of MscI incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.	Pass
Functional Testing (Restriction Digest, Buffer) A 50 µl reaction in 1X rCutSmart™ Buffer containing 1 µg of Lambda DNA and 1 unit of EcoRI-HF® incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.	Pass
Functional Testing (Restriction Digest, Buffer) A 50 µl reaction in 1X rCutSmart™ Buffer containing 1 µg of Lambda dam- DNA and 1 unit of ClaI incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10232267
<p>Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X rCutSmart™ Buffer containing 1 µg of PhiX174-HaeIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>RNase Activity (Buffer) A 10 µl reaction in 1X rCutSmart™ 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.</p>	Pass
<p>pH (buffers/solutions) The pH of 10X rCutSmart™ Buffer is between pH 7.8 and 8.0 at 25°C.</p>	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.



Nancy Considine
Production Scientist
08 Feb 2024



Michael Tonello
Packaging Quality Control Inspector
12 Feb 2024