

New England Biolabs Certificate of Analysis

Product Name: *rCutSmart™ Buffer*
Catalog Number: *B6004S*
Concentration: *10 X Concentrate*
Packaging Lot Number: *10180571*
Expiration Date: *12/2025*
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	10173663	Pass

Assay Name/Specification	Lot # 10180571
Conductivity (buffers/solutions) The conductivity of 10X rCutSmart™ Buffer is between 40 and 46 mS/cm at 25°C.	Pass
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.	Pass
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.	Pass
pH (buffers/solutions) The pH of 10X rCutSmart™ Buffer is between pH 7.8 and 8.0 at 25°C.	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

Assay Name/Specification	Lot # 10180571
<p>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.</p>	Pass
<p>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.</p>	Pass
<p>Functional Testing (Restriction Digest, Buffer) A 50 µl reaction in 1X rCutSmart™ Buffer containing 1 µg of Lambda dam- DNA and 1 unit of Clal incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.</p>	Pass

This product has been tested and shown to be in compliance with all specifications.

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Nancy Considine
Production Scientist
27 Jan 2023



Michael Tonello
Packaging Quality Control Inspector
16 Feb 2023