

New England Biolabs Certificate of Analysis

Product Name: CutSmart® Buffer
Catalog Number: B7204S
Concentration: 10 X Concentrate
Packaging Lot Number: 10093217
Expiration Date: 12/2023
Storage Temperature: -20°C
Specification Version: PS-B7204S v1.0
Composition (1X): 50 mM Potassium Acetate , 20 mM Tris Acetate, 10 mM Magnesium Acetate, 100 µg/ml BSA, (pH 7.9 @ 25°C)

CutSmart® Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B7204SVIAL	CutSmart® Buffer	10091036	Pass

Assay Name/Specification	Lot # 10093217
Conductivity (buffers/solutions) The conductivity of 10X CutSmart® Buffer is between 40 and 46 mS at 25°C.	Pass
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X CutSmart® 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 CutSmart® 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
Functional Testing (Restriction Digest, Buffer) A 50 µl reaction in 1X CutSmart® 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
Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X CutSmart® 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

Assay Name/Specification	Lot # 10093217
<p>pH (buffers/solutions) The pH of 10X CutSmart[®] Buffer is between pH 7.8 and 8.0 at 25°C.</p>	Pass
<p>RNase Activity (Buffer) A 10 µl reaction in 1X CutSmart[®] 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 fluorescent detection.</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.



Michael Dalton
Production Scientist
21 Dec 2020



Josh Hersey
Packaging Quality Control Inspector
21 Dec 2020