

New England Biolabs Certificate of Analysis

Product Name: CutSmart[®] Buffer
Catalog #: B7204S
Concentration: 10X Concentrate
Lot #: 3021803
Assay Date: 03/2018
Expiration Date: 03/2021
Storage Temp: -20°C
Composition (1X): 50 mM Potassium Acetate, 20 mM Tris Acetate, 10 mM Magnesium Acetate, 100 µg/ml BSA, (pH 7.9 @ 25°C)
Specification Version: PS-B7204S v1.0
Effective Date: 31 Jan 2018

Assay Name/Specification (minimum release criteria)	Lot #3021803
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
pH (buffers/solutions) - The pH of 10X CutSmart [®] Buffer is between pH 7.8 and 8.0 at 25°C.	Pass
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.	Pass

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* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.



Authorized by
Derek Robinson
31 Jan 2018



Inspected by
Michael Dalton
18 May 2018

