

New England Biolabs Certificate of Analysis


Product Name: CutSmart® Buffer
Catalog Number: B7204S
Concentration: 10 X Concentrate
Packaging Lot Number: 10064163
Expiration Date: 01/2023
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	10064409	Pass

Assay Name/Specification	Lot # 10064163
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
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
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
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

Assay Name/Specification	Lot # 10064163
<p>Conductivity (buffers/solutions) The conductivity of 10X CutSmart® Buffer is between 40 and 46 mS at 25°C.</p>	Pass
<p>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.</p>	Pass

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



Doreen Duquette
Production Scientist
28 Jan 2020



Jay Minichiello
Packaging Quality Control Inspector
11 Feb 2020