

New England Biolabs Certificate of Analysis


Product Name: CutSmart[®] Buffer
Catalog Number: B7204S
Concentration: 10 X Concentrate
Packaging Lot Number: 10079346
Expiration Date: 05/2023
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 | 10074631 | Pass |

| Assay Name/Specification | Lot # 10079346 |
|---|----------------|
| 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 # 10079346 |
|--|----------------|
| <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.



Doreen Duquette
Production Scientist
05 May 2020



Josh Hersey
Packaging Quality Control Inspector
09 Jul 2020