

## New England Biolabs Certificate of Analysis

**Product Name:** CutSmart® Buffer  
**Catalog Number:** B7204S  
**Concentration:** 10 X Concentrate  
**Packaging Lot Number:** 10098398  
**Expiration Date:** 02/2024  
**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      | 10093122   | Pass                 |

| Assay Name/Specification  | Lot # 10098398 |
|---|----------------|
| <b>Functional Testing (Restriction Digest, Buffer)</b><br>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. | <b>Pass</b>    |
| <b>Functional Testing (Restriction Digest, Buffer)</b><br>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.      | <b>Pass</b>    |
| <b>Non-Specific DNase Activity (16 hour, Buffer)</b><br>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.   | <b>Pass</b>    |
| <b>pH (buffers/solutions)</b><br>The pH of 10X CutSmart® Buffer is between pH 7.8 and 8.0 at 25°C.  | <b>Pass</b>    |
| <b>RNase Activity (Buffer)</b><br>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.                    | <b>Pass</b>    |

| Assay Name/Specification   | Lot # 10098398 |
|--|----------------|
| <p><b>Conductivity (buffers/solutions)</b><br/>The conductivity of 10X CutSmart<sup>®</sup> Buffer is between 40 and 46 mS at 25°C.</p>  | <b>Pass</b>    |
| <p><b>Endonuclease Activity (Nicking, Buffer)</b><br/>A 50 µl reaction in 1X CutSmart<sup>®</sup> Buffer containing 1 µg of supercoiled PhiX174 DNA incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | <b>Pass</b>    |

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

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19 Feb 2021



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19 Feb 2021