Product Name: CutSmart® Buffer
Catalog #: B7204S
Concentration: 10X Concentrate
Shelf Life: 36 months
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: 14 Sep 2017

Assay Name/Specification (minimum release criteria)

Conductivity (buffers/solutions) - The conductivity of 10X CutSmart® Buffer is between 40 and 46 mS at 25°C.

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.

Functional Testing (Restriction Digest, Buffer) - A 50 µl reaction in 1X CutSmart® Buffer containing 1 µg of Lambda dam- DNA and 1 unit of Clal incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.

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 37ºC results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.

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.

pH (buffers/solutions) - The pH of 10X CutSmart® Buffer is between pH 7.8 and 8.0 at 25°C.

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.

* 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.

Derek Robinson
Director of Quality Control

Date 14 Sep 2017

PS-B7204S v1.0
Page 1 of 1