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New England Biolabs
Product Specification

Product Name:	*DNase I Reaction Buffer*
Catalog #:	*B0303S*
Concentration:	*10X Concentrate*
Shelf Life:	*36 months*
Storage Temp:	*-20°C*
Composition (1X):	*10 mM Tris-HCl, 2.5 mM $MgCl_2$, 0.5 mM $CaCl_2$, (pH 7.6 @ 25°C)*
Specification Version:	*PS-B0303S v1.0*
Effective Date:	*16 May 2018*

Assay Name/Specification (minimum release criteria)
Endonuclease Activity (Nicking, Buffer) - A 50 µl reaction in 1X DNase I Reaction 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 (DNaseI Reaction Buffer) - A 50 µl reaction in 1X DNase I Reaction Buffer containing 1 µg pBR322 DNA and 1:100 units DNaseI (RNase Free) incubated for 10 minutes at 37°C 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 DNase I Reaction Buffer containing 1 µg of HaeIII digested PhiX174 RF I 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 DNase I Reaction Buffer is between pH 7.5 and 7.7 at 25°C.
RNase Activity (Buffer) - A 10 µl reaction in 1X DNase I Reaction 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 polyacrylamide gel electrophoresis.

Date 16 May 2018

Derek Robinson
Director of Quality Control

ISO 9001 Registered Quality Management
ISO 14001 Registered Environmental Management
ISO 13485 Registered Medical Devices