NEW ENGLAND BioLabs® Inc.

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New England Biolabs
Product Specification

Product Name:	*T7 Exonuclease*
Catalog #:	*M0263S/L*
Concentration:	*10,000 units/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to produce 1 nmol of acid-soluble deoxyribonucleotide in a total reaction volume of 50 µl in 30 minutes at 37°C in 1X NEBuffer 4 with 0.15 mM sonicated duplex [^{3}H]-DNA.*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl, 5 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 8.0 @ 25°C)*
Specification Version:	*PS-M0263S/L v1.0*
Effective Date:	*23 May 2018*

Assay Name/Specification (minimum release criteria)
Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of T7 Exonuclease incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.
Protein Purity Assay (SDS-PAGE) - T7 Exonuclease is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.
RNase Activity (Extended Digestion) - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 10 units of T7 Exonuclease is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.
Single Stranded DNase Activity (FAM-Labeled Oligo) - A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 10 units of T7 Exonuclease incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.

Date 23 May 2018

Derek Robinson
Director of Quality Control

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