NEW ENGLAND BioLabs® Inc.

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New England Biolabs
Product Specification

Product Name:	*DNase I-XT*
Catalog #:	*M0570S/L*
Concentration:	*2,000 units/ml*
Unit Definition:	*One unit is defined the amount of enzyme required to release 260 pmol of FAM from FAM-BHQ1 labeled 35 nt hairpin oligo in 1 min at 30°C in a 50 µl reaction.*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl, 2 mM $CaCl_2$, 50% Glycerol, (pH 7.6 @ 25°C)*
Specification Version:	*PS-M0570S/L v2.0*
Effective Date:	*04 Aug 2022*

Assay Name/Specification (minimum release criteria)
Protein Purity Assay (SDS-PAGE) - DNase I-XT is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.
qPCR DNA Contamination (Eukaryotic Genomic) - A minimum of 2 units of DNase I-XT is screened for the presence of eukaryotic genomic DNA using SYBR® Green qPCR with universal primers for the 18S rRNA locus. Results are quantified using a standard curve generated from purified *E. album* genomic DNA. The measured level of eukaryotic genomic DNA contamination is ≤ 2.5 pg DNA/µl.
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 2 units of DNase I-XT 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.

Derek Robinson
Quality Approver

Date 04 Aug 2022