

New England Biolabs Product Specification

Product Name: DNase I (RNase-free)
Catalog #: M0303S/L
Concentration: 2,000 units/ml
Unit Definition: One unit is defined as the amount of enzyme which will completely degrade 1 µg of pBR322 DNA in 10 minutes at 37°C in DNase I Reaction Buffer. Complete degradation is defined as the reduction of the majority of DNA fragments to tetranucleotides or smaller.
Shelf Life: 24 months
Storage Temp: -20 °C
Storage Conditions: 10 mM Tris-HCl (pH 7.6), 2 mM CaCl₂, 50 % Glycerol
Specification Version: PS-M0303S/L v1.0
Effective Date: 14 Nov 2013

Assay Name/Specification (minimum release criteria)

Protein Purity Assay (SDS-PAGE) - DNase I (RNase-free) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

RNase Activity (ds RNA) - A 50 µl reaction in DNase I Reaction Buffer containing 10 µg of a dsRNA Ladder and a minimum of 100 units of DNase I (RNase-free) is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by fluorescent 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 2 units of DNase I (RNase-free) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.



Derek Robinson
Director of Quality Control

Date 14 Nov 2013

