

## New England Biolabs Product Specification

*Product Name:* Nuclease-free Water  
*Catalog #:* B1500S/L  
*Shelf Life:* 24 months  
*Storage Temp:* 20 to 25°C  
*Specification Version:* PS-B1500S/L v2.0  
*Effective Date:* 15 Feb 2018

### Assay Name/Specification (minimum release criteria)

**Endonuclease Activity (Nicking, Water)** - A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 RF I DNA with Nuclease-free Water incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

**Endotoxin Testing (Endosafe®)** - Each test channel of the cartridge is loaded with 25 µl of Nuclease-free Water, then placed into the Endosafe MCS reader for analysis resulting in a measurement of <0.01 EU/ml.

**Non-Specific DNase Activity (16 Hour, Water)** - A 50 µl reaction in CutSmart® Buffer containing 1 µg of PhiX174-HaeIII DNA with Nuclease-free Water incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

**RNase Activity (Extended Digestion, Water)** - A 10 µl reaction in 1X NEBuffer 4 containing 40 ng of RNA transcript with Nuclease-free Water is incubated at 37°C. After incubation for 16 hours, no detectable degradation of the RNA is observed as determined by gel electrophoresis using fluorescent detection.

**UV-Visible Scan** - A UV-Visible scan using a spectrophotometer that covers the range of 200nm to 800nm will have no detectable peaks above background.

**qPCR DNA Contamination (E. coli Genomic, Water)** - Nuclease-free Water is used to make a qPCR master mix and screened across a 96 well plate for the presence of *E. coli* genomic DNA using 40 cycles of SYBR® Green qPCR with primers specific for the *E. coli* 16S rRNA locus. Melt curve analysis results in < 5% positive samples above background.



Date 15 Feb 2018

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