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# New England Biolabs
# Certificate of Analysis

| | |
|---|---|
| *Product Name:* | *Thermostable OGG* |
| *Catalog Number:* | *M0464S* |
| *Concentration:* | *8,000 U/ml* |
| *Unit Definition:* | *One unit is defined as the amount of enzyme required to cleave 10 pmol of a 60-mer fluorescently labeled oligonucleotide duplex containing a single 8-oxoguanine base paired with a cytosine in a total reaction volume of 10 µl in 1 hour at 65°C.* |
| *Packaging Lot Number:* | *10226658* |
| *Expiration Date:* | *02/2026* |
| *Storage Temperature:* | *-20°C* |
| *Storage Conditions:* | *10 mM Tris-HCl, 500 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)* |
| *Specification Version:* | *PS-M0464S v1.0* |

| Thermostable OGG Component List | | | |
|---|---|---|---|
| **NEB Part Number** | **Component Description** | **Lot Number** | **Individual QC Result** |
| M0464SVIAL | Thermostable OGG | 10226657 | **Pass** |
| B6004SVIAL | rCutSmart™ Buffer | 10229453 | **Pass** |

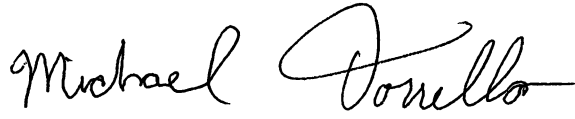| Assay Name/Specification | Lot # 10226658 |
|---|---|
| **DNase Activity (Labeled Oligo, 3' extension)** <br> A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a 3' extension and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis. | **Pass** |
| **DNase Activity (Labeled Oligo, 5' extension)** <br> A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a 5' extension and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis. | **Pass** |
| **Double Stranded DNase Activity (Labeled Oligo)** <br> A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a blunt end and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis. | **Pass** |

| Assay Name/Specification | Lot # 10226658 |
|---|---|
| **Non-Specific DNase Activity (16 Hour)**<br>A 50 µl reaction in NEBuffer 1 containing 1 µg of Lambda-HindIII DNA and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass |
| **Protein Purity Assay (SDS-PAGE)**<br>Thermostable OGG is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | Pass |
| **RNase Activity (Extended Digestion)**<br>A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 8 units of Thermostable OGG 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. | Pass |
| **Single Stranded DNase Activity (FAM-Labeled Oligo)**<br>A 50 µl reaction in CutSmart® Buffer containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 40 units of Thermostable OGG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis. | Pass |
| **qPCR DNA Contamination (E. coli Genomic)**<br>A minimum of 8 units of Thermostable OGG is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome. | Pass |

This product has been tested and shown to be in compliance with all specifications.

One or more products referenced in this document may be covered by a 3rd-party trademark.  Please visit www.neb.com/trademarks for additional information.

Nicole Castagnozzi
Production Scientist
16 Feb 2024

Michael Tonello
Packaging Quality Control Inspector
26 Apr 2024