

New England Biolabs Product Specification

Product Name: *Monarch[®] Genomic DNA Purification Kit*

Catalog #: *T3010G*

Kit Components: *Monarch[®] gDNA Tissue Lysis Buffer (T3011)*
Monarch[®] gDNA Cell Lysis Buffer (T3012)
Monarch[®] gDNA Blood Lysis Buffer (T3013)
Monarch[®] gDNA Binding Buffer (T3014)
Monarch[®] gDNA Wash Buffer (T3015)
Monarch[®] gDNA Elution Buffer (T3016)
Monarch[®] gDNA Purification Columns (T3017)
Proteinase K, Molecular Biology Grade (P8107)
Monarch[®] RNase A (T3018)
Monarch[®] Collection Tubes II (T2018)

Shelf Life: *18 months*

Storage Temp: *25°C*

Specification Version: *PS-T3010G v1.0*

Effective Date: *25 Aug 2021*

Assay Name/Specification (minimum release criteria)

Functional Testing (Blood Cell Lysis Buffer, Monarch[®]) - Genomic DNA is purified from 8 samples of whole pig blood using the protocol for extraction and purification of genomic DNA for Mammalian Whole Blood (non-nucleated), with ≥ 2 μg of gDNA being recovered in $\geq 80\%$ of the samples. OD 260/280 and 260/230 are ≥ 1.75 in $\geq 80\%$ of the samples.

Functional Testing (Cell Lysis Buffer, Monarch[®]) - Genomic DNA is purified from 8 individual aliquots of HeLa cells (10^6 cells/aliquot) using the Protocol for Extraction and Purification of Genomic DNA from Cultured Cells, resulting in ≥ 3 μg of gDNA being recovered in $\geq 80\%$ of the samples. OD 260/280 and 260/230 are ≥ 1.75 in $\geq 80\%$ of the samples.

Functional Testing (DNA Recovery and Purity) - Twenty-four Monarch[®] gDNA Purification Columns are tested with 5 μg of HindIII digested Lambda resulting in $\geq 75\%$ recovery in $\geq 80\%$ of the samples. OD 260/280 and 260/230 are ≥ 1.75 in $\geq 80\%$ of the samples.

Functional Testing (RNase A, Monarch[®]) - A 10 μl reaction in NEBuffer 4 containing 40 ng of fluorescein labeled RNA transcript and RNase A is incubated at 37°C. After incubation for 5 minutes, complete disappearance of the RNA substrate occurs at ≤ 1.0 $\mu\text{g}/\text{ml}$ of RNase A, as determined by gel electrophoresis using fluorescent detection.



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Assay Name/Specification (minimum release criteria)

Functional Testing (Tissue Lysis Buffer, Monarch®) - Genomic DNA is purified from 8 NEB10-Beta samples treated using the Supplemental Protocol for Genomic DNA Purification from Gram-negative Bacteria, resulting in $\geq 5 \mu\text{g}$ of gDNA being recovered in $\geq 80\%$ of the samples. OD 260/280 and 260/230 are ≥ 1.75 in $\geq 80\%$ of the samples.

* **Individual Product Component Note** - Standard Quality Control Tests are performed for each component included in Monarch® Genomic DNA Purification Kit and meet the designated specifications.

*One or more products referenced in this document may be covered by a 3rd-party trademark.
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Date 25 Aug 2021

Derek Robinson
Director, Quality Control

