

## New England Biolabs Product Specification

*Product Name:* Monarch<sup>®</sup> Total RNA Miniprep Kit  
*Catalog #:* T2010S  
*Kit Components:* Monarch<sup>®</sup> gDNA Removal Columns (T2017)  
Monarch<sup>®</sup> RNA Purification Columns (T2007)  
Monarch<sup>®</sup> Collection Tubes II (T2018)  
Monarch<sup>®</sup> DNA/RNA Protection Reagent (T2011)  
Monarch<sup>®</sup> RNA Lysis Buffer (T2012)  
Monarch<sup>®</sup> Proteinase K (T2001)  
Monarch<sup>®</sup> Proteinase K Resuspension Buffer (T2002)  
Monarch<sup>®</sup> Proteinase K Reaction Buffer (T2003)  
Monarch<sup>®</sup> DNase I (T2004)  
Monarch<sup>®</sup> DNase I Reaction Buffer (T2005)  
Monarch<sup>®</sup> RNA Priming Buffer (T2013)  
Monarch<sup>®</sup> RNA Wash Buffer (T2014)  
Monarch<sup>®</sup> Nuclease-free Water (T2006)

*Shelf Life:* 24 months  
*Storage Temp:* 25°C  
*Specification Version:* PS-T2010S v2.0  
*Effective Date:* 23 Mar 2021

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

**Functional Testing (DNA Recovery and Purity)** - Twenty-four Monarch<sup>®</sup> RNA Purification Columns are tested with 10 µg of Lambda/BstEII Marker resulting in ≥75% recovery in ≥80% of the samples. OD 260/280 and 260/230 are ≥1.75 in ≥80% of the samples.

**Functional Testing (DNA Recovery)** - Eight Monarch<sup>®</sup> gDNA Removal Columns are tested with 10 µg of Lambda/BstEII Marker resulting in ≥65% recovery in ≥80% of the samples.

**Functional Testing (DNase I, Monarch<sup>®</sup>)** - A 50 µl reaction in Monarch<sup>®</sup> DNase I Reaction Buffer with 1 µg of pBR322 and 5 mU Monarch<sup>®</sup> DNase I incubated for 10 minutes at 37°C results in digestion of the DNA fragments to ≤500 bp as determined by agarose gel electrophoresis.



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

**Functional Testing (Proteinase K, Monarch®)** - A 20 µl reaction in Monarch® Proteinase K Reaction Buffer with 10 µg of MBP5 and 50 ng Monarch® Proteinase K incubated for 5 minutes at 37°C results in >75% digestion of the protein as determined by SDS-PAGE using Coomassie Blue detection.

**Functional Testing (RNA Yield and Integrity Analysis)** - Total RNA is purified from 8 individual aliquots of HeLa cells (10<sup>6</sup> cells/aliquot). Yield of RNA is >5 µg in ≥75% of the samples. OD 260/280 and 260/230 are ≥1.75 in ≥80% of the samples as well as RIN values ≥8 in ≥80% of the samples.

*One or more products referenced in this document may be covered by a 3rd-party trademark.  
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Date 23 Mar 2021

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