New England Biolabs
Product Specification

Product Name: Monarch® Total RNA Miniprep Kit
Catalog #: T2010S

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

Shelf Life: 18 months
Storage Temp: 25°C
Specification Version: PS-T2010S v1.0
Effective Date: 09 Nov 2017

Assay Name/Specification (minimum release criteria)

Functional Testing (DNA Recovery and Purity) - Twenty-four Monarch® 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® 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®) - A 50 µl reaction in Monarch® DNase I Reaction Buffer with 1 µg of pBR322 and 5 mU Monarch® 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.
<table>
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<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
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<tbody>
<tr>
<td><strong>Functional Testing (Proteinase K, Monarch®)</strong> - 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 &gt;75% digestion of the protein as determined by SDS-PAGE using Coomassie Blue detection.</td>
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<td><strong>Functional Testing (RNA Yield and Integrity Analysis)</strong> - Total RNA is purified from 8 individual aliquots of HeLa cells (10^6 cells/aliquot). Yield of RNA is &gt;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.</td>
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Derek Robinson  
Director of Quality Control  

Date 09 Nov 2017