Norgen’s Total RNA Purification Micro Kit provides a rapid method for the isolation and purification of total RNA from small input amounts of cultured animal cells, tissue samples, and microdissected samples including laser-capture microdissection (LCM). The kit purifies all sizes of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA), without the use of phenol or chloroform.

Purification is based on spin column chromatography using Norgen’s proprietary resin as the separation matrix. The RNA is preferentially purified from other cellular components such as proteins. The purified RNA is of the highest integrity, and can be used in a number of downstream applications including real-time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays.

### Kit Specifications

<table>
<thead>
<tr>
<th>Column Binding Capacity</th>
<th>35 µg</th>
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</thead>
<tbody>
<tr>
<td>Maximum Column Loading Volume</td>
<td>650 µL</td>
</tr>
<tr>
<td>Minimum Elution Volume</td>
<td>20 µL</td>
</tr>
<tr>
<td>Size of RNA Purified</td>
<td>All sizes</td>
</tr>
<tr>
<td>Average RNA Yield:</td>
<td></td>
</tr>
<tr>
<td>HeLa Cells (1 x 10^5 cells)</td>
<td>1.5 µg</td>
</tr>
</tbody>
</table>

Maximum Amount of Starting Material:

- Animal Cells: 5 x 10^5 cells
- Animal Tissues*: 3 mg
- Laser-Captured Microdissection (LCM): Up to 5 x 10^5 cells

Time to Complete 10 Purifications: 20 minutes

* Maximum recommended input of tissue varies depending on the type of tissue being used.

### Total RNA Purification Micro Kit Benefits

- **Small elution volumes**: The special design of the micro spin-column allows a small elution volume of as little as 20 µL.
- **Isolate a diversity of RNA species**: All RNA species can be isolated, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA), without compromising total yield.
- **Fast and easy processing**: Rapid spin-column format allows for the processing of 10 samples in 20 minutes.
- **No phenol:chloroform extractions**: Total RNA is isolated without the use of harmful chemicals such as phenol or chloroform.
- **Ideal for small samples**: Isolate total RNA from small input amounts of cultured animal cells, tissue samples, and LCM samples. Total RNA has been isolated and detected from as little as a single animal cell.
- **Recovered RNA is suitable for downstream applications**: Purified RNA can be used in a number of downstream applications including real-time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array analysis requiring the use of intact RNA.
Total RNA Purification Micro Kit

Figure 1. Great Isolation Sensitivity. Norgen’s Total RNA Purification Micro Kit allows sensitive RNA extraction from as little as a single cell. Total RNA was extracted from a decreasing number of HeLa cells. Five µL of the eluted RNA was used as the template in a 20 µL RT-qPCR reaction to detect the human S14 transcript. The S14 was detected from as little as a single cell.

Total RNA Purification Micro Kit Contents
1. Wash Solution
2. Elution Solution
3. Lysis Solution
4. Micro Spin Columns
5. Collection Tubes
6. Elution Tubes

Figure 2. High Quality RNA Isolated from Laser-Captured Microdissection (LCM). Norgen’s Total RNA Purification Micro Kit allows sensitive but high quality RNA extraction from small inputs such as Laser-Captured Microdissection (LCM). Total RNA was isolated from 6 different LCM samples. RNA yield and quality (260/280 ratio) were assessed by NanoVue spectrophotometry. Norgen’s Total RNA Purification Kit recovered good amounts of RNA with excellent 260/280 ratio.

Customer-Supplied Reagents and Equipment
- Benchtop microcentrifuge
- 95% ethanol
- β-mercaptoethanol
- PBS (Cultured cells)
- Mortar and pestle, liquid nitrogen, 70% ethanol (Tissue)
- Sterile, fine forceps, 42°C water bath, 70% ethanol (LCM)

Shipping Conditions
The Total RNA Purification Micro Kit is shipped at room temperature.

Storage Conditions
All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for 1 year in their unopened containers.

<table>
<thead>
<tr>
<th>Cat #</th>
<th>Description</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>35300</td>
<td>Total RNA Purification Micro Kit</td>
<td>50 preps</td>
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