

# New Product: ArrayGrade™ Total RNA Isolation Kit

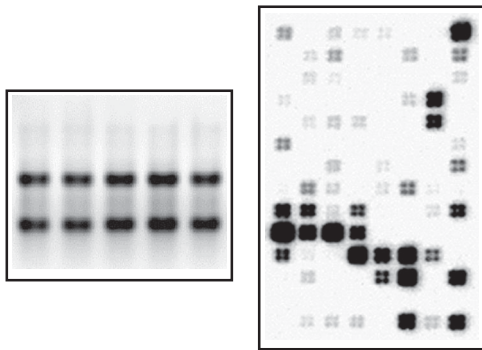
## ArrayGrade™ Total RNA Isolation Kit

- Optimized for gene expression analysis
- Provides superior microarrays results
- Isolates purified RNA in < 30 minutes

### Better RNA quality produces better gene expression analysis results

RNA quality is one of the most important factors for successful gene expression analyses. The ArrayGrade™ Total RNA Isolation Kit has been optimized for use with Oligo GEArray® Pathway-Focused DNA Microarrays (Figures 1 and 2). The RNA isolated by the ArrayGrade™ Total Kits generates more specific signals by reducing interference from enzyme inhibitors.

### ArrayGrade RNA Purified from Cell Lines



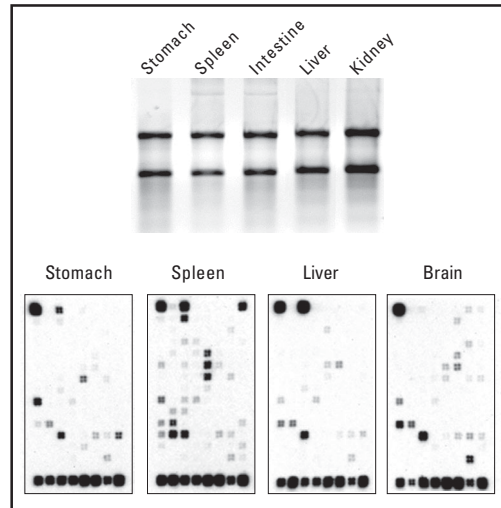
**Figure 1: Purification of RNA from transformed cell lines with ArrayGrade™ Total RNA Isolation Kit.** RNA was isolated from MCF7 cells using the ArrayGrade™ Total RNA Isolation Kit. One microgram of each RNA sample was loaded onto a 2% agarose gel (left panel). Each sample demonstrates clear, sharp 28S and 18S ribosomal RNA bands. RNA (3 µg) was also characterized on a representative Oligo GEArray® (right panel). ArrayGrade Total RNA Isolation Kit provides RNA from cell lines for optimal performance with the GEArray platform.

### Background:

The ArrayGrade™ Total RNA Isolation Kit employs a silica membrane spin column-based technology. The lysis buffer, with its chaotropic components, stabilizes RNA and prevents its degradation while allowing its optimal retention on the spin column. Washing the column removes salts, metabolites, and other macromolecular cellular components. Low ionic strength conditions then elute pure RNA from the column.

The ArrayGrade™ Total RNA Isolation Kit has been tested using human cell lines, such as HEK-293, HeLa, MCF-7, and MDA-231 (Figure 1). It has also been tested with mouse tissues such as heart, liver, lung, kidney, brain, and others (Figure 2). Replicate isolations yield RNA with consistent yield and quality as seen in Table 1.

### ArrayGrade RNA Purified from Tissues



**Figure 2: Purification of RNA from mouse tissues using the ArrayGrade™ Total RNA Isolation Kit.** One microgram of RNA isolated from several mouse tissues (top) using the ArrayGrade™ Total RNA Isolation Kit was characterized by 1% agarose gel electrophoresis. Each sample demonstrates sharp 28S and 18S ribosomal RNA bands. RNA (3 µg) isolated from mouse stomach, spleen, liver, and brain was also characterized on separate copies of a representative Oligo GEArray® (bottom). ArrayGrade Total RNA Isolation Kit provides RNA from tissues for optimal performance with the GEArray platform.

### Convenience and Efficiency:

The ArrayGrade™ Kit provides easy and efficient total RNA isolation with purity and high yield. The protocol requires only 30 minutes of hands-on time. The kit includes sufficient materials to purify 12 RNA samples.

Replicate	Yield (µg)	A260/A280
1	21.0	2.4
2	21.0	2.1
3	22.0	2.1
4	21.5	2.0
5	21.5	2.1

**Table 1: The ArrayGrade Total RNA Isolation Kit isolates RNA with reproducible quantity and quality.** RNA was isolated from five separate but equal portions of MCF7 cells with the ArrayGrade Total RNA Isolation Kit. The yield and A260/A280 ratio for each sample is displayed. These same samples were also characterized by agarose gel in Figure 1.

ArrayGrade™ Total RNA Isolation Kit

GA-013

Reagents and materials for preparation of microarray grade RNA from up to 12 crude cell lysates.