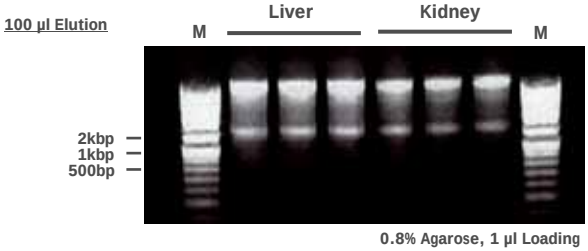
Fully Automated Magtration System GC series for total RNA Purification from Animal Tissue

●Performance of Total RNA purification from mouse liver and kidney

Table 1 Materials and Reagents

Reagent	MagDEA RNA 100 Cell/Tissue (GC) (Code No. E7004)
Protocol	MagDEA RNA 100 Cell/Tissue ver.1.0
Sample	Mouse Liver and Kidney
Sample Pretreatment	Homogenize with *RNAlater*®
Sample Volume	100 µl (Liver: 8.1 mg, Kidney: 7.3 mg)
Elution Volume	50 µl / 100 µl
Operation Time	Approx. 40 min. (Without DNase I treatment) Approx. 65 min. (Including DNase I treatment)



Lane M : 100bp ladder
Samples treated at same time

Figure 1.
Agarose gel electrophoresis of purified total RNA treated with DNase I from mouse liver and kidney by Magtration System 12GC

●Yields and Quality of purified total RNA

Table 2 Yield and Purity (N=3)

Sample	Yield (µg)	A_{260}/A_{280}	A_{260}/A_{230}
Mouse Liver	25.8 ± 0.5	2.05 ± 0.01	1.78 ± 0.03
Mouse Kidney	10.9 ± 0.3	2.06 ± 0.02	1.91 ± 0.03

Table 3 Quality of purified RNA (Agilent BioAnalyzer 2100)

Sample	rRNA ratio [28s/18s]	RNA Integrity number
Mouse Liver	1.30 ± 0.00	8.5 ± 0.1
Mouse Kidney	1.26 ± 0.02	8.3 ± 0.2

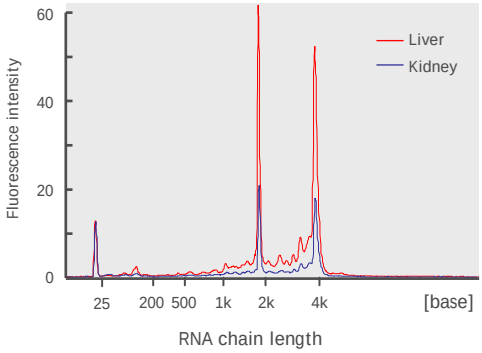
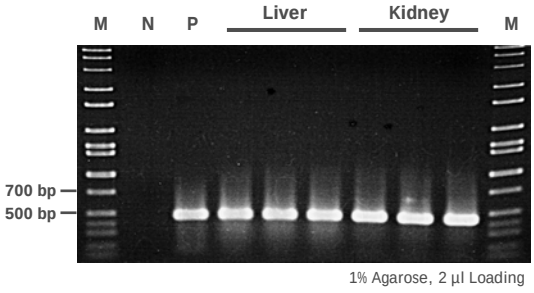


Figure 2.
Electropherogram of total RNA isolated from mouse liver and kidney by Agilent 2100 bioAnalyzer.

●RT-PCR amplification using total RNA purified from the tissue by Magtration System 12GC

Table 4 Condition of PCR amplification

Template	2 µl	RT-PCR Cycle
Primer Target	RT- PCR of Mouse G3PDH gene (452 bp) using OneStep RT-PCR Kit (Qiagen Inc.)	RT step: 50°C, 30min → 95°C, 15min Repeat (30 cycles): 94°C, 30sec → 55°C, 30sec → 72°C, 1min Extension: 72°C, 10min



Lane M : Wide-Range DNA Ladder Marker (TAKARA BIO INC. Cat. No. 3415A)
Lane N : Negative control
Lane P : Positive control

Figure3.
RT-PCR of total RNAs purified from mouse liver and kidney .

Advantages

The Magtration System GC series is the most reliable genomic DNA purification system in the current market. The Magtration System GC series enables processing of sample in a short time in a small footprint on a lab-bench. The genomic DNA purified by the Magtration System GC series is sufficient in yield and purity to be used in downstream applications directly, such as PCR. The Magtration System GC series is a true walk-away automation system.

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