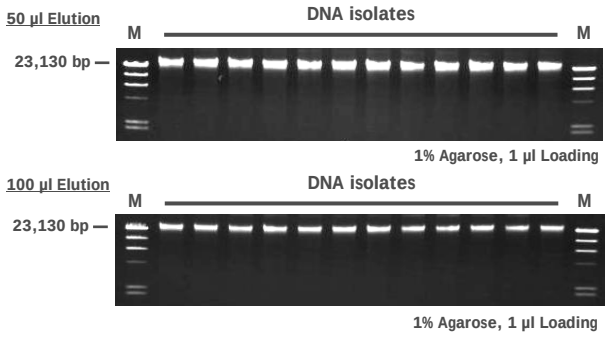
Fully Automated Magtration System GC series for Genomic DNA Purification from Whole Blood

●Performance of genomic DNA purification from whole blood

Table 1 Materials and Reagents

Reagent	MagDEA DNA 200 Whole Blood (GC) (Code No. E7001)
Protocol	MagDEA DNA 200 Whole Blood ver.1.2
Sample	Human whole blood treated with EDTA-2Na
Sample Volume	200 µl
Elution Volume	50 µl / 100 µl
Operation Time	Approx. 40 min.



Lane M : λ*Hind* III digest Marker
(TAKARA BIO INC., Cat. No. 3404)
Samples treated at same time

Figure 1.
Agarose gel electrophoresis of purified genomic DNA from whole blood by Magtration System 12GC

●Yields and concentrations of DNA from 2 types of elution volumes

Table 2 Yield and Purity (n=12)

Sample	Elution vol (µl)	Yield (µg)	A_{260}/A_{280}
Human whole blood treated with EDTA-2Na	50	4.97 ± 0.22	1.98 ± 0.01
	100	5.88 ± 0.17	1.96 ± 0.02

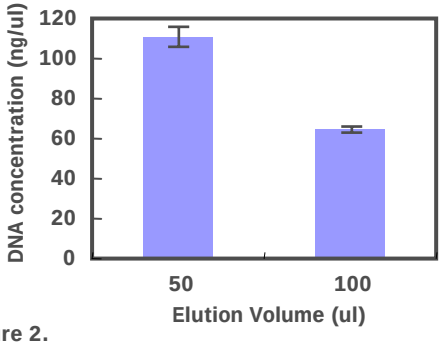
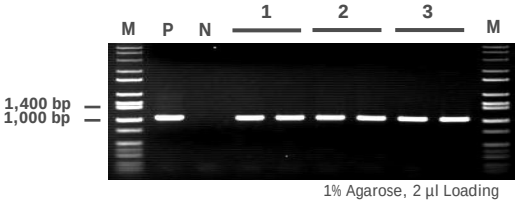


Figure 2.
Typical concentration from different elution volume

●PCR amplification using DNA purified from whole blood by Magtration System 12GC

Table 3 Condition of PCR amplification

Template	50 ng	PCR Cycle
Primer Target	Benzodiaze pine (BZD) receptor (located on GABA receptor) 1038 bp	Pre-heat 94°C, 5min Repeat (30 cycles): 94°C, 20sec → 57°C, 30sec → 72°C, 1min Extension 72°C, 10min
Enzyme	TaKaRa Ex Taq	



Lane M : Wide-Range DNA Ladder Marker
(TAKARA BIO INC. Cat. No. 3415A)
Lane P : Positive control
Lane N : Negative control
Lane 1 : DNA from EDTA treated whole blood
Lane 2 : DNA from Heparin treated whole blood
Lane 3 : DNA from ACD treated whole blood

Figure3.
Agarose gel electrophoresis of purified DNA from whole blood with the different types of anticoagulant

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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