



# Fully Automated Magtration System GC series for Viral DNA/RNA Purification from serum(200 μl)

Table 1 Materials and Reagents

Reagent	MagDEA DNA/RNA 200 Virus (GC) (Code No. E7003)	Sample volume	200 μl
Protocol	MagDEA DNA/RNA 200 Virus ver.1.0	Elution volume	50 μl / 100 μl

## Evaluation of viral DNA from M13mp18 phage purified by Magtration System 12GC

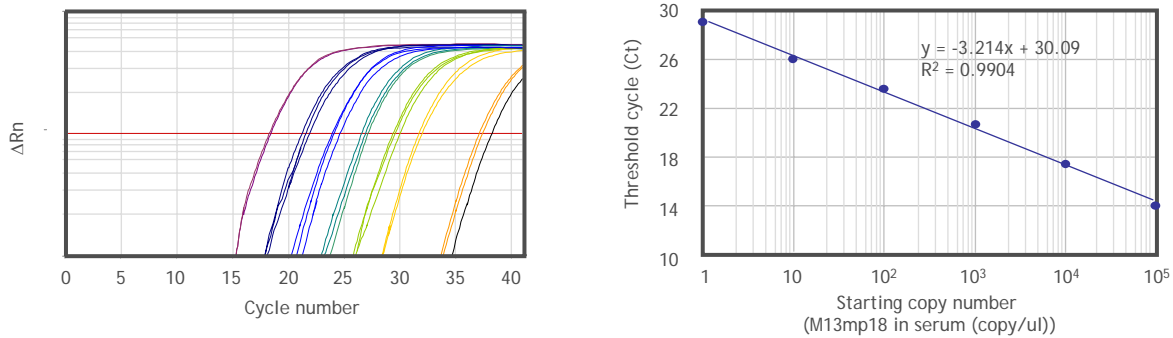


Figure 1. Real-time PCR of purified DNA by using Magtration System 12GC from each copy number of M13mp18 phage spiked in serum .

copy/μl (Copy number/200ul)

— 10<sup>5</sup> (2x10<sup>7</sup>) — 10<sup>4</sup> (2x10<sup>6</sup>) — 10<sup>3</sup> (2x10<sup>5</sup>) — 10<sup>2</sup> (2x10<sup>4</sup>) — 10 (2x10<sup>3</sup>) — 1 (2x10<sup>2</sup>) — 0.1 (2x10) — Negative control

A model experiment to purify virus nucleic acid from serum sample was performed and a successful purification result was verified. DNA was extracted from the 200 μl human serum sample that spiked M13mp18 phage of the each copy number. DNA was purified, and concentrated from 200 μl samples to 50 μl by using Magtration System 12GC robotics (n=3). 2 μl of DNA was used as the Real-time PCR template.

## Viral RNA purification from Influenza positive specimens by Magtration System 12GC

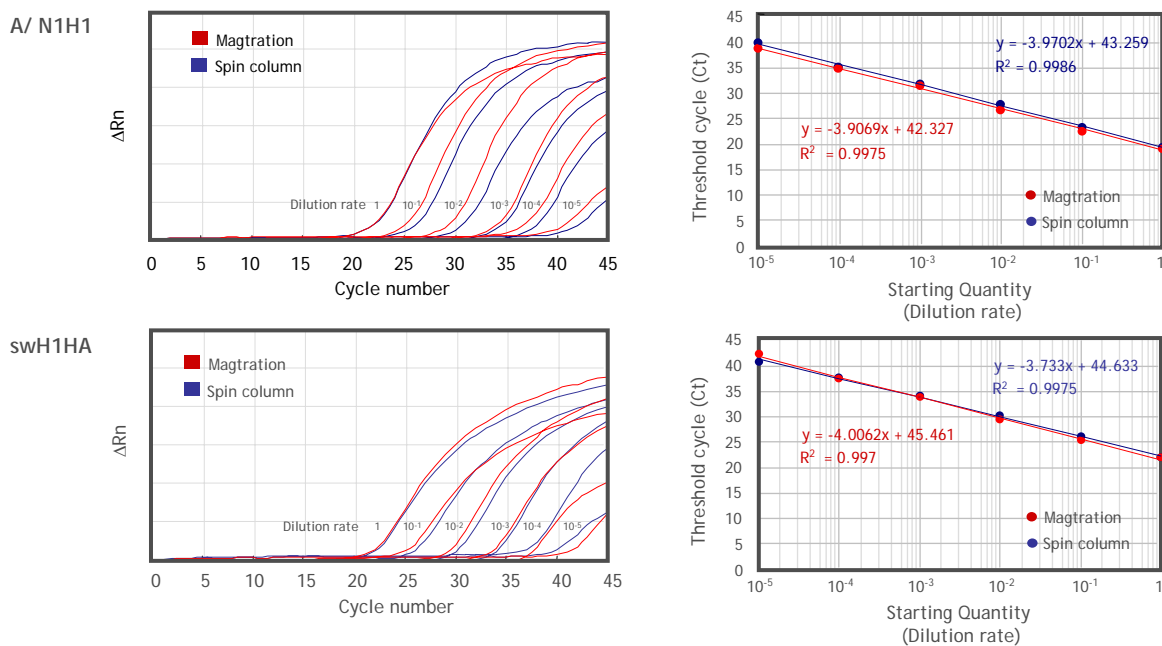


Figure 2. Real-time PCR of purified viral RNA from each dilution rate of human specimens infected influenza virus

The purification of virus RNA in the human specimens of influenza infection was verified. Viral RNA was extracted from the nasal swab suspended in 200 μl of transportation medium (referred to the WHO guideline) as a starting sample. Viral RNA was purified, and concentrated from 200 μl samples to 50μl. 5μl of purified viral RNA was used as the PCR template. To examine the purification efficiency, the 1x10<sup>-1</sup> - 1x10<sup>-5</sup> dilution samples were prepared from the stock solution and purified by Magtration System 12GC. The detection sensitivity of Real-Time PCR using viral RNA purified by the spin column method (Q company) was compared with 'MagDEA DNA/RNA 200 Virus' reagent using Magnetic beads(A/N1H1, swH1HA).

### Advantages

The Magtration System GC series would be the most reliable DNA/RNA purification system in the current market. The Magtration System GC series enables to proceed in a short time in a small footprint on a lab-bench. The Magtration System GC series is true walk-away automation system.



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